OIL SPILL RESPONSE PLAN

Linn Energy, LLC
Linn Western Operating, Inc.

JULY 2013

Prepared for:

Linn Western Operating, Inc.
2000 Tonner Canyon Road
Brea, CA 92821
Phone: (714) 529-2780

Prepared by:

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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

Linn Western Operating, Inc. 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:

Ricardo Perry Date: 7/3/13

NOTE: Witt O'Brien's provided consulting and plan development services in the preparation of this Plan utilizing data provided by the owner/operator. Witt O'Brien's assumes no liability for injury, loss, or damage of any kind resulting directly or indirectly from the use of the regulatory interpretation, response planning, or information contained in this plan.

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

FACILITY NAME: Linn Western Operating, Inc.
FACILITY ADDRESS: 2000 Tonner Canyon Road
Brea, CA 92821

Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16 km) in length? and

YES _____ NO __X__

1. Has any line section experienced a release greater than 1,000 barrels (159 cu. Bbl) within the previous five years? or

YES _____ NO __X__

2. Has any line section experienced two or more reportable releases, as defined in Sec. 195.50, within the previous five years? or

YES _____ NO __X__

3. Does any line section contain any electric resistance welded pipe, manufactured prior to 1970 and operates at a maximum operating pressure established under Sec. 195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe? or

YES _____ NO __X__

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

YES _____ NO __X__

5. Is any line located within a 1-mile (8 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?

YES __X__ NO _____

Linn Western Operating, Inc. 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.

Ricardo Perez — Signature
Corrosion/DOT Coordinator — Title
Ricardo Perez — Name (please type or print)
7/3/13 — Date

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REVISION RECORD			
CHANGE DATE	REMOVE	INSERT	DESCRIPTION OF CHANGE(S)
	PAGE NUMBER(S)		
July 2013		ALL	New Plan distributed by Witt O'Brien's

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

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

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DISTRIBUTION LIST	
COPY NUMBER	**PLAN HOLDER (Hard Copies)**
1	Vincent VanDelden EH&S Representative Linn Western Operating, Inc. 2000 Tonner Canyon Road Brea, CA 92821
2, 3 (2 electronic copies)	Melanie Barber Response Plans Officer Pipeline and Hazardous Materials Safety Administration U.S. DOT Office of Pipeline Safety 1200 New Jersey Avenue SE-E-22-311 Washington, DC 20590
4 (Electronic)	Witt O'Brien's 818 Town & Country Blvd., Suite. 200 Houston, TX 77024

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

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

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APPENDICES

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1.0 INTRODUCTION AND PLAN CONTENT

1.1 PLAN PURPOSE/OBJECTIVES

The purpose of this Oil Spill Response Plan (Plan) is to assist Linn Western Operating, Inc. (LWOI) personnel to prepare for and respond 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 at the Facility.

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. 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 is detailed in Figure 1.1.

1.3 PLAN DISTRIBUTION PROCEDURES

LWOI Management is responsible for maintenance and distribution of the Plan. Distribution will be handled in the following manner:

- Distribution of the Plan is controlled by the number on the cover page. A distribution list is included in the Foreword to facilitate control.
- Company personnel who may be called upon to provide assistance during discharge response activities will have access to a copy of the plan for their use and training.
- Any person holding a copy of the Plan shall ensure that the copy is transferred to their replacement in the event of reassignment or change in responsibility.

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1.4 PLAN REVIEW AND UPDATE PROCEDURES

Annual Review/Update

LWOI Management 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.

Incorporation of Plan Revisions

Upon receipt of any revisions, the **Plan Holder** shall:

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

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).

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1.4 PLAN REVIEW AND UPDATE PROCEDURES (Cont'd)

Conditions Requiring Changes (Cont'd)

- A material change in capabilities of the Oil Spill Removal Organization(s) (OSROs) that provide equipment and personnel.
- A change in emergency response procedures.
- A change in the Qualified Individual.
- A change in the NCP or an 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)
- U.S. Environmental Protection Agency - Region 9, Regional Integrated Contingency Plan.
- U.S. Coast Guard - Sector Los Angeles - Long Beach Area Contingency Plan.

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FIGURE 1.1

INFORMATION SUMMARY

GENERAL INFORMATION	
Pipeline Name:	Linn Brea Tonner Pipeline System
PHMSA OPID Number:	TBD
Owner Name:	***Physical Address*** 2000 Tonner Canyon Road Brea, CA 92821 ***Mailing Address*** 2000 Tonner Canyon Road Brea, CA 92821
24 Hour Emergency Contact Phone Numbers:	(714) 529-2780
Qualified Individual:	Scott Schulte - District Production Supervisor Linn Western Operating, Inc. 2000 Tonner Canyon Road Brea, CA 92821 (714) 257-1606 (Office) (714) 318-0448 (24 Hr.)
Alt. Qualified Individual:	Russ Quinlivin - Production Foreman Linn Western Operating, Inc. 2000 Tonner Canyon Road Brea, CA 92821 (714) 257-1611 (Office) (714) 287-1501 (24 Hr.)
Alt. Qualified Individual:	Vincent VanDelden - Environmental Health and Safety Linn Western Operating, Inc. 2000 Tonner Canyon Road Brea, CA 92821 (714) 257-1604 (Office) (714) 356-4638 (24 Hr.)
Telephone/FAX:	Additional telephone references, including 24 hour numbers for the Facility Owner/Operator are provided in Figure 2.2.
Primary SIC Code:	4612
NAICS:	486110

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FIGURE 1.1

INFORMATION SUMMARY (Cont'd)

GENERAL INFORMATION (Cont'd)	
Determination of Significant and Substantial Harm (DOT/PHMSA):	The pipeline is greater than 6 and 5/8 inches in outside diameter and less than 10 miles long. The pipeline is therefore considered capable of causing significant harm.
Operator Statement of "Significant and Substantial Harm":	It is Linn Western Operating, Inc.'s goal to respond as quickly as possible to all uncontrolled releases of petroleum products, regardless of the source point location along the system. Based upon this goal, and the over breadth of the definitions provided in 49 CFR 194.103(c)(4) & (5), the Company is compelled to consider all the active line sections listed below as capable of a release potentially causing "significant and substantial harm".
PIPELINE LOCATION	
States Traversed:	California
Response Zones:	Detailed later in this Figure. Also see Figure 1.2.
County:	Orange
PHYSICAL DESCRIPTION - PIPELINE	

General:

- Product is transferred from the Linn Tonner Tank Farm, the Brea County Tank Farm, and the Columbia Tank Farm in Orange County, CA to the Sterns Crude Oil Shipping Junction and Columbia Tank Farm in Orange County, CA. Line sizes vary from 4.5 inches to 8 inches. The pipeline is 3.55 miles long.
- This Plan is written in English and understood by personnel responsible for carrying out the plan.

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FIGURE 1.1

INFORMATION SUMMARY (Cont'd)

PHYSICAL DESCRIPTION - PIPELINE (Cont'd)

Pipeline Specifications:

The basic specifications of the pipeline are as follows:

- **Product Types:** Crude Oil
- **Pipe Detail:** The pipeline systems consists of the following pipeline sections:

  Tonner Shipping (Oil) #1229 - 4 ½ in.

  Brea Canon Shipping (Oil) #1230 - 4 ½ in.

  Columbia Tank Shipping (Oil) #1269 - 4 ½ in.

  Columbia Tank Shipping (Oil) #1269 - 6 ⅝ in.

  Columbia Tank Shipping (Oil) #1269 - 8 ⅝ in.

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:

- Explosions/fire
- Line Break or Leak
- Abnormal Pipeline Operations

These scenarios could result in the following discharge volume:

Response Zone	Discharge Scenario	Potential Oil Group	DOT/PHMSA Planning Volume
Brea Response Zone	WCD	3	(b) (7)(F)

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FIGURE 1.1

INFORMATION SUMMARY (Cont'd)

PHYSICAL DESCRIPTION - PIPELINE (Cont'd)
Response Resources (Cont'd):
The worst case discharge volume is utilized in calculating the planning volume for response resources. The planning volume is used to determine the necessary on-water recovery capacity to respond within the three tiered response times. The identified oil spill recovery devices should be capable of arriving at the scene of a discharge within the time specified for the applicable response tier. The tier requirements for high volume areas are for response in 6 hours (Tier 1), 30 hours (Tier 2), and 54 hours (Tier 3). High volume areas are listed in 49 CFR 194. The tier requirements for all other areas are for response in 12 hours (Tier 1), 36 hours (Tier 2), and 60 hours (Tier 3). Appendix B of this Plan demonstrates a series of calculations and planning volume determinations based on guidance provided by the U.S. Environmental Protection Agency (EPA) in 40 CFR Part 112 *Final Rule* dated July 1, 1994 and the Department of Transportation (DOT) PHMSA regulations in 49 CFR 194.105 dated June 16, 2005. The inclusion of these calculations is for demonstration of the response planning volumes and response capability necessary for on-water and on-shore recovery requirements as the result of the discharge scenarios outlined in the table above.
Note: The Linn Brea Tonner Pipeline System is located in a High Volume Area and has contracted Patriot Environmental Services, an OSRO, to respond to a release within the time frames described above.

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FIGURE 1.1

INFORMATION SUMMARY (Cont'd)

RESPONSE ZONE INFORMATION

General:

- The Brea Response Zone includes the following:

BREA RESPONSE ZONE

Name of Pipeline	Type of Oil	(b) (7)(F)	County	State
Tonner Shipping (Oil) #1229 - 4 ½ in.	Crude	[redacted]	Orange County	CA
Brea Canyon Shipping (Oil) #1230 - 4 ½ in.	Crude		Orange County	CA
Columbia Tank Shipping (Oil) #1269 - 4 ½ in.	Crude		Orange County	CA
Columbia Tank Shipping (Oil) #1269 - 6 ⅝ in.	Crude		Orange County	CA
Columbia Tank Shipping (Oil) #1269 - 8 ⅝ in.	Crude		Orange County	CA

- Available personnel, capability, resources, and geographic characteristics are consistent across the line segment and justify a single Response Zone.

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FIGURE 1.2

AREA MAP

(b) (7)(F)

2.0 NOTIFICATION PROCEDURES

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. Internal Notification References are included in Figure 2.2.

2.1 INTERNAL NOTIFICATION

The following internal notifications should be made for each emergency incident to the extent that the incident demands (telephone reference is provided in Figure 2.2). In no circumstance 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. The typical internal notification responsibilities for each person potentially involved in the initial response are as follows:

First Person to Discover Spill

- Take appropriate action to protect life and ensure safety of personnel. Call 911 if necessary. Immediately notify Foreman.

Foreman/AQI

- Notify District Production Supervisor/QI
- Notify EHS Representative/AQI
- Assume the role of Incident Commander, if necessary.

District Production Supervisor/QI

- Notify Production and Drilling Manager (Regional Manager)
- Assume the role of Incident Commander

EHS Representative/AQI

- Notify EHS Manager

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FIGURE 2.1

INTERNAL NOTIFICATION SEQUENCE

(Phone references are provided in Figures 2.2 and 2.4)

714-529-2780

This number will refer you to a 24 hour answering service if it is an emergency. The answering service will call Linn employees in the priority given

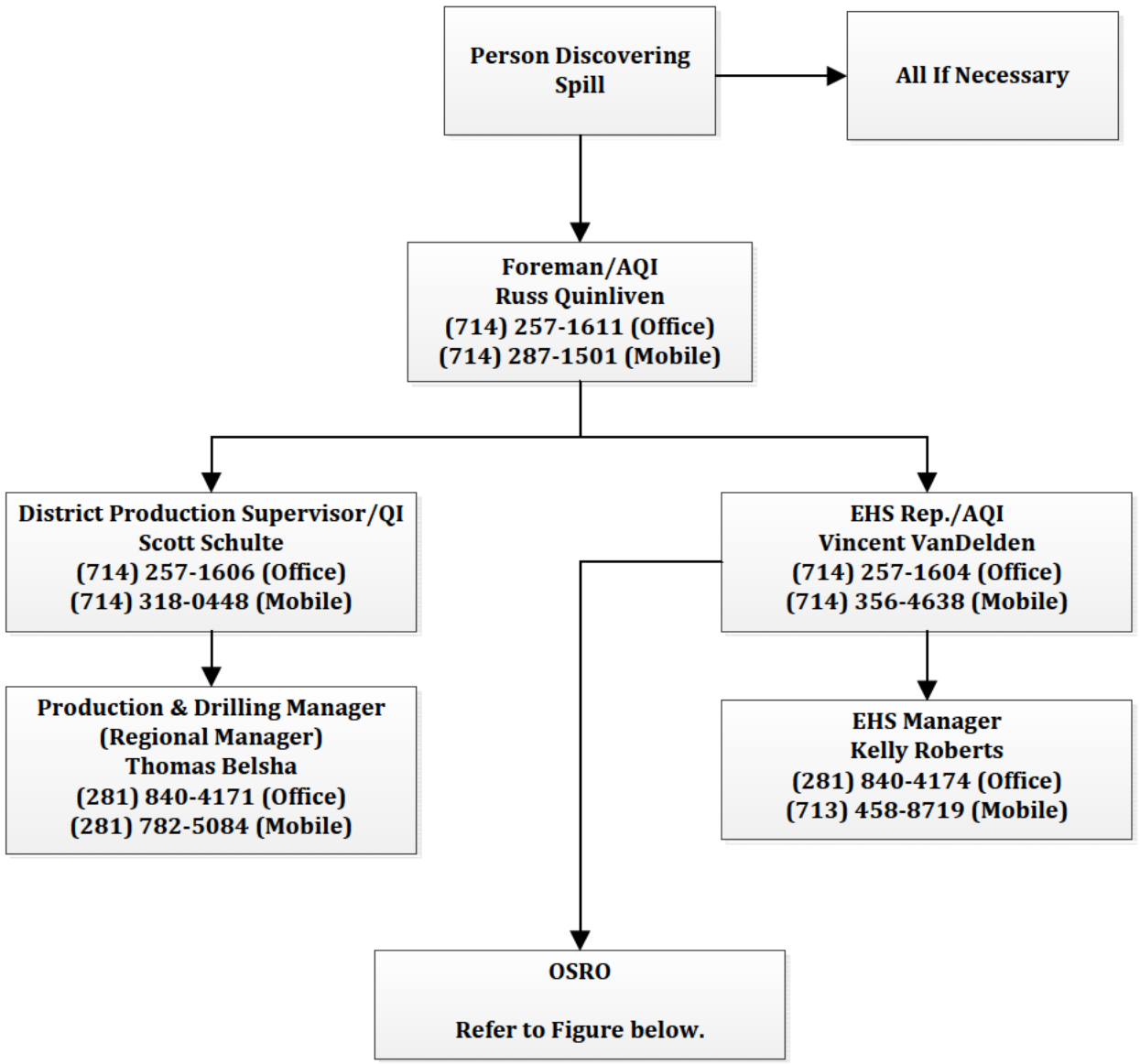

FIGURE 2.2

INTERNAL NOTIFICATION REFERENCES

INTERNAL NOTIFICATIONS			
TITLE	**NAME**	**OFFICE**	**OTHER**
District Production Supervisor (QI)	Scott Schulte	(714) 257-1606	(714) 318-0448* (Cell)
Foreman (AQI)	Russ Quinlivin	(714) 257-1611	(714) 287-1501* (Cell)
EHS Rep. (AQI)	Vincent VanDelden	(714) 257-1604	(714) 356-4638* (Cell)
EHS Manager	Kelly Roberts	(281) 840-4174	(713) 458-8719* (Cell)
Production & Drilling Manager	Thomas Belsha	(281) 840-4171	(281) 782-5084* (Cell)

* Denotes 24 Hr. availability.

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FIGURE 2.3

NOTIFICATION DATA SHEET

Date of Incident: _____ ***Time of Incident:*** _____

INCIDENT DESCRIPTION

Reporter's Full Name: _____ ***Position:*** _____
Day Phone Number: _____ ***Evening Phone Number:*** _____
Company: Linn Western Operating, Inc. ***Organization Type:*** _____

Facility Address: Linn Western Operating, Inc.
2000 Tonner Canyon Road
Brea, CA 92821

Owner's Address: Linn Western Operating, Inc.
2000 Tonner Canyon Road
Brea, CA 92821

Facility Latitude: _____ ***Facility Longitude:*** _____
Incident Address/Location: _____
(if not at Facility): _____
On-Scene Weather Conditions: _____
Responsible Party's Name: _____ ***Phone Number:*** _____
Responsible Party's Address: _____
Source and/or cause of incident: _____

Nearest City: _____
County/Parish: _____ ***State:*** _____ ***Zip code:*** _____
Section: _____ ***Township:*** _____ ***Range:*** _____ ***Borough:*** _____
Distance from City: _____ ***Unit of Measure:*** _____ ***Direction from City:*** _____
Container Type: _____ ***Container Storage Capacity:*** _____ ***Unit of Measure:*** _____
Facility Oil Storage Capacity: _____ ***Unit of Measure:*** _____
Were Materials Discharged? _____ ***(Y/N) Confidential?*** _____ ***(Y/N)***

CHRIS Code	Total Quantity Released	Unit of Measure	Water Impact (*YES or NO*)	Quantity into Water	Unit of Measure

RESPONSE ACTION(S)

Action(s) taken to Correct, Control, or Mitigate Incident: _____

Number of Injuries: _____ ***Number of Deaths:*** _____
Evacuation(s): _____ ***(Y/N) Number Evacuated:*** _____
Was there any damage? _____ ***(Y/N) Medium Affected:*** _____
Description: _____
More Information about Medium: _____

CALLER NOTIFICATIONS

National Response Center (NRC): 1-800-424-8802
Additional Notifications (Circle all applicable): ***USCG*** ***EPA*** ***State*** ***Other***
Describe: _____
NRC Incident Assigned No: _____

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in this report: _____

Meeting Federal Obligations to Report? _____ ***(Y/N) Date Called:*** _____
Calling for Responsible Party? _____ ***(Y/N) Time Called:*** _____

NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.

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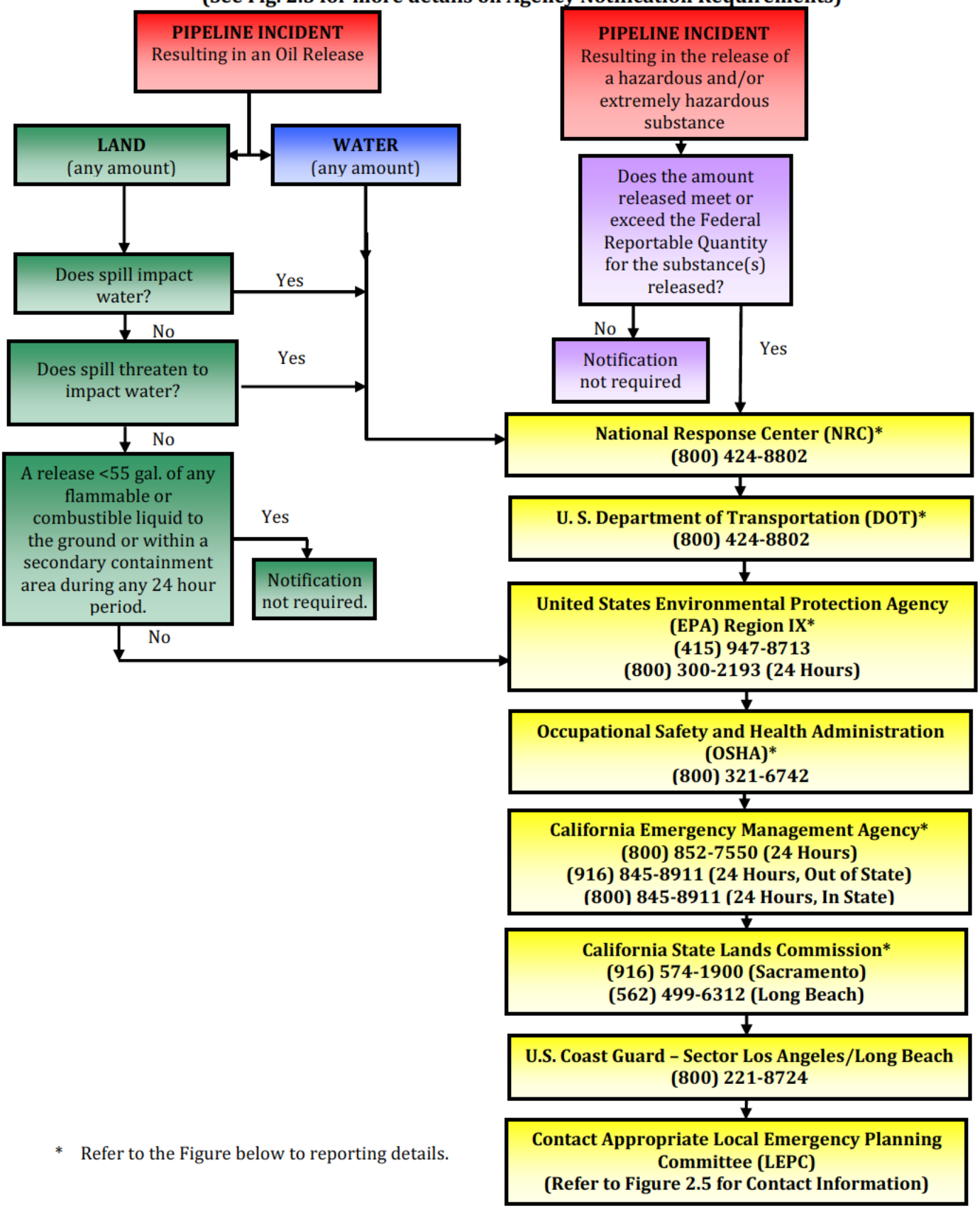
FIGURE 2.4

EXTERNAL NOTIFICATION FLOWCHART

(See Fig. 2.5 for more details on Agency Notification Requirements)



* Refer to the Figure below to reporting details.

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 will be made as follows:

- ***Environmental Contact or ES&H Consultant***

    - National Response Center (NRC)
    - Appropriate state agency
    - Local agencies
    - All releases reported to any agency due to special agreement

The Notification Data Sheet (see Figure 2.3) should be used to begin the external notification process, keeping in mind that there are some strict time limits for making certain calls.

The following are guidelines to be considered when initiating external notifications:

- Receive faxed copy of Notification Data Sheet from Company employee or, at a minimum, gather pertinent incident information from the third party reporting the release.

- Do not report information that has not been verified or confirmed, usually by field personnel.

- Do not speculate as to the cause on an incident or make any statements about liability.

- Do not delay notifications because of incomplete information.

- When making notifications, document:

    - Agency notified, including telephone number
    - Date and time of notification
    - Person notified
    - Content of message
    - Incident number, if applicable

External required agency notifications contact numbers are provided in Figure 2.4.

Periodic Follow-up Notification during Emergency Response

Periodic follow-up notification must be made within the Company as well as to federal, state, and local agencies. Responsibility for periodic follow-up notifications remains with each individual as initially assigned within the notification process flowcharts provided in Figure 2.1, unless that responsibility has been transferred based on the magnitude of the response. Internal follow-up can be completed by email.

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES

REQUIRED NOTIFICATIONS		
NATIONAL RESPONSE CENTER		
National Response Center c/o United States Coast Guard (CG-5335) – Stop 7581 2100 2nd Street SW Washington, D.C. 20593-0001	(800) 424-8802 * (202) 267-2675 * (202) 267-1322 (Fax)	**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. NOTE: A call to the NRC must also be made for spills or releases of crude oil that meet or exceed their RQ (10 Bbls for WDEQ). VERBAL: Immediate notification required. WRITTEN: Not required

* 24-Hour Number

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

REQUIRED NOTIFICATIONS (Cont'd)		
DEPARTMENT OF TRANSPORTATION		
US Dept. of Transportation Information Resources Manager Office of Pipeline Safety Pipeline and Hazardous Materials Safety Administration 1200 New Jersey Avenue SE-E-22-311 Washington, DC 20590	(800) 424-8802* (202) 267-2675* (202) 267-2165 (Fax)	**REPORTING REQUIREMENTS** TYPE: In addition to the reporting of accidents to the NRC, a written accident report (Form PHMSA F7000-1, provided in Appendix C) must be submitted for releases resulting in any of the following: 1. Explosion or fire not intentionally set by the operator. 2. Release of 5 gallons or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than 5 barrels resulting from a pipeline maintenance activity if the release is: a. Not one described under the NRC's reporting conditions. b. Confined to Company 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 DOT Form 7000-1 (included in this Figure). The report must be sent to DOT no later than 30 days after the release. Changes or additions to the original report (DOT Form 7000-1) must file a supplemental report within 30 days.

* 24-Hour Number

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

REQUIRED NOTIFICATIONS (Cont'd)		
U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 9		
75 Hawthorne St. San Francisco, CA 94105	(415) 947-8713 (800) 300-2193 (24 Hr.)	**REPORTING REQUIREMENTS (40 CFR 300.300)** TYPE: Immediately for spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the EPA is typically accomplished by the call to the NRC. WRITTEN: Per SPCC requirements, a written report must be submitted within 60 days for a spill in excess of 1,000 gallons (approximately 24 Bbls) in a single event or two spill events within a twelve month period into or upon navigable waters of the United States or adjoining shorelines. The written report should contain all of the elements listed in 40 CFR 112.4(a). As per RCRA regulations, a written report on the incident must be submitted to the Regional Administrator within 15 days from the date of the incident. The report must include: 1. Name, address, and telephone number of the owner or operator; 2. Name, address, and telephone number of the Facility; 3. Date, time, and type of incident (e.g., fire, explosion); 4. Name and quantity of material(s) involved; 5. The extent of injuries, if any; 6. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and 7. Estimated quantity and disposition of recovered material that resulted from the incident.

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

REQUIRED NOTIFICATIONS (Cont'd)		
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)		
200 Constitution Avenue Washington, D.C. 20210	(800) 321-6742	**REPORTING REQUIREMENTS (29 CFR 1904.39)** TYPE: Fatality from a work related incident or the inpatient hospitalization of three (3) or more employees as a result of a work related incident. VERBAL: Immediately. WRITTEN: As requested by the Agency.
CALIFORNIA EMERGENCY MANAGEMENT AGENCY (CAL EMA)		
3650 Schriever Avenue Mather, California 95655	(800) 852-7550 (24 Hours) (916) 845-8911 (24 Hours, Out of State) (800) 845-8911 (24 Hours, In State)	**REPORTING REQUIREMENTS** TYPE: Notification is required if any of the following occurred: • Any amount into or threatening state waters - inland, marine, or groundwater. • Any amount into a storm drain. • Any amount onto city and county streets. • Any amount onto state highways and freeways. • Any amount onto land (except for certain San Joaquin Valley oil fields). • 5 barrels or more uncontained in certain San Joaquin Valley oil fields. • 10 barrels or more contained in certain San Joaquin Valley oil fields. • Crude oil release of more than five barrels from a pipeline or flow line in a rural area –if no threat to state waters. • Fire or explosion; or • Bodily injury or death to any person VERBAL: Immediately WRITTEN: As may be requested by the agency

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

REQUIRED NOTIFICATIONS (Cont'd)		
CALIFORNIA STATE LANDS COMMISSION		
100 Howe Avenue, Suite 100 South Sacramento, CA 95825-8202	(916) 574-1900 (Sacramento) (562) 499-6312 (Long Beach)	**REPORTING REQUIREMENTS** TYPE: Any spill on state lands VERBAL: Immediately WRITTEN: As may be requested by the agency
LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) REGION I (ORANGE COUNTY)		
18239 W. Soledad Canyon Road Canyon Country, CA 91351	(661) 298 5283	**REPORTING REQUIREMENTS (40 CFR 300.300)** TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Immediately. WRITTEN: As the agency may request depending on circumstances.

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FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

POTENTIAL REQUIRED NOTIFICATIONS			
AGENCY	**LOCATION**	**OFFICE**	**ALTERNATE**
U.S. Coast Guard Sector Los Angeles/Long Beach	San Pedro, CA	(310) 521-3600 (Primary)	(800) 221-8724 (Emergency)

FIRE, POLICE, HOSPITALS			
DIAL 911 ***for All Police, Fire, and Ambulance Emergencies***			
AGENCY	**LOCATION**	**OFFICE**	**ALTERNATE**
Brea Fire Department	Brea, CA	(714) 990-7644	
Fire Department	Brea, CA	(714) 990-7655	
Brea Police Department	Brea, CA	(714) 990-7911	
Walnut/Diamond Bar Sheriff Station	Walnut, CA	(909) 595-2264	
Placentia Police Department	Placentia, CA	(714) 993-8164	
Emergency Ambulance Services	Brea, CA	(714) 990-1331	
Emergency Ambulance	Walnut, CA	911	
Caduceus Medical Group	Yorba Linda, CA	(714) 577-6031	
Placentia Linda Hospital	Placentia, CA	(714) 993-2000	

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FIGURE 2.6

OIL SPILL REMOVAL ORGANIZATIONS (UNDER CONTRACT/AGREEMENT)			
COMPANY	**LOCATION**	**OFFICE/ ALTERNATE**	**RESPONSE TIME**
Patriot Environmental Services	Long Beach, CA	(800) 624-9136 (24 Hr. Emergency) (562) 436-2614 (Long Beach Office)	4 Hours

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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 variety of emergencies that have the possibility of occurring. These emergencies are discussed in the order listed below:

- Explosions/Fire
- Line Break or Leak
- Abnormal Pipeline Operations
- Medical Emergency

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

The first company person discovering a release will function as the person-in-charge until relieved by the qualified individual or Spill Management Team.

The Qualified Individual has the authority to take the steps necessary to control the situation and during initial response.

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

In addition to the potential emergency events outlined in this section, the Company has identified several "abnormal operations" that could be expected in the pipeline. The pipeline has defined the events and established procedures to identify, eliminate or mitigate the threat of worst case discharge due to these events.

3.1 INITIAL RESPONSE ACTIONS (Cont'd)

FIRST PERSON TO DISCOVER A SPILL

Before taking ANY action (other than calling for assistance), if the emergency may involve the release of a hazardous material, you MUST also be trained and familiar with the appropriate considerations and processes.

As a first responder to the site of an apparent emergency, your initial objective is **site management**. Don't become part of the problem; set the foundation for proper ongoing site management.

- _____ Immediately notify Operation Control Center (OCC) to shut down pipeline operations. Take appropriate action to protect life and ensure safety of personnel. Contact the appropriate local emergency responders or request the office to do so.
- _____ Contact Pipeline Management.
- _____ Secure the scene. Isolate the area and assure the safety of people and the environment. Keep people away from the scene and outside the safety perimeter.
- _____ Follow the appropriate *"Specific Incident Response Checklist"* in Figure 3.1 and *"Product Specific Response Considerations"* in Figure 3.2.

PIPELINE MANAGEMENT (QI)

- _____ Assume role of Incident Commander until relieved by person more qualified or the Vice President of HSSE.
- _____ Conduct preliminary assessment of health and safety hazards.
- _____ Evacuate nonessential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary).
- _____ Provide an incident briefing.
- _____ Notify the Operations Control Center to initiate the Emergency Notification Process for Environmental Spill Response coordination.
- _____ If safe to do so, direct facility responders to shut down potential ignition sources in the vicinity of the spill, including motors, electrical pumps, electrical power, flares, etc. Keep drivers away from truck rack if spill occurs there.
- _____ If safe to do so, direct facility responders to shut down and control the source of the spill. Be aware of potential hazards associated with product and ensure that lower explosive limits (LELs) are within safe levels before sending personnel into the spill area.
- _____ If safe to do so, direct facility responders to stabilize and contain the situation. This may include construction of minor earthen berms and/or sorbent boom and pads.

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3.1 INITIAL RESPONSE ACTIONS (Cont'd)

PIPELINE MANAGEMENT (QI) (Cont'd)

- _____ For low flash oil (<100ºF), consider applying foam over the oil, using water spray to reduce vapors, grounding all equipment handling the oil, and using non-sparking tools.
- _____ Obtain the information necessary to complete the Notification Data Sheet (located in figure 2.3).
- _____ Make appropriate notifications as detailed in Section 2 of this plan.

VICE PRESIDENT OF HSSE

- _____ Activate the Spill Management Team and primary spill responders, as appropriate.
- _____ Make appropriate notifications as detailed in Section 2 of this plan.

SPILL MANAGEMENT TEAM

- _____ Activate all or a portion of Spill Management Team (SMT) (as necessary). Environmental Department will maintain contact with notified regulatory agencies.
- _____ Mobilize spill response contractors (if necessary). It is much better to demobilize equipment and personnel if not needed than to delay contacting them if they are needed.
- _____ Document all response actions taken, including notifications, agency/media meetings, equipment and personnel mobilization and deployment, and area impacted.
- _____ Water-based Spills: Initiate spill tracking and surveillance operations. Determine extent of pollution via surveillance aircraft or vehicle. Estimate volume of spill utilizing the Spill Volume Estimating guidance document in the Miscellaneous Forms appendix.
- _____ Land-based Spills: Initiate spill tracking and surveillance operations. Determine extent of pollution via surveillance aircraft or vehicle. Estimate volume of spill utilizing the Spill Volume Estimating guidance document in the Miscellaneous Forms appendix.

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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

Priorities:

- _____ Take appropriate action to protect life and ensure the safety of personnel.

The success or failure of an operation often depends on the first contract person on-scene's ability to take command of the situation and implement the *Oil Spill Response Plan*.

Before taking ANY action (other than calling for assistance), if the emergency may involve the release of a hazardous material, you MUST also be trained and familiar with the appropriate considerations and processes.

As a first responder to the site of an apparent emergency, your initial objective is **site management**. Don't become part of the problem; set the foundation for proper ongoing site management.

Isolate the area; deny entry.

If the integrity of the line is in question, call Operations Control Center immediately; then contact your supervisor and implement the *Oil Spill Response Plan*.

- _____ Take appropriate action to protect life and ensure the safety of personnel.

- _____ Rescue in the HOT Zone: Attempt **only** if you are trained to the Haz Mat Tech level and these three conditions are met:
  a. adequate personal protective equipment is available, **and**
  b. sufficient time apparently exists to complete without endangering your own life, **and**
  c. there is an adequate number of emergency response personnel present.

If possible, it is best to have professional emergency response personnel perform rescue.

- _____ Evacuation involves three steps:
  a. notify evacuees to gather in a safe, central area, moving uphill and/or at a right angle to any migrating liquid or vapor, and if possible, upwind.
  b. if needed, provide transportation to move evacuees to a reasonably safe area.
  c. care for evacuees: provide water, food, clothing, shelter, and information.

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

INITIAL RESPONSE (Cont'd)

Emergency response agencies will generally perform evacuation.

- _____ Administer first aid.

Perform other First Aware/First Responder activities:

- _____ Emergency alarms/signals must be distinctive, timely and appropriate to the site; personnel must be trained in the recognition and response to the alarms/signals.

- _____ Facility evacuation plans displayed on employee notice boards must include:
  a. emergency contact numbers (local emergency response agencies and federal agencies)
  b. facility drawing denoting exits and corridor traffic flow direction arrows and the designated meeting place

- _____ Take authorized action to protect property, including prevention of environmental damage, especially the contamination of water.
  a. stop ongoing leaks
  b. stabilize and contain the situation

- _____ If roads or other transportation routes are present in the affected area, assist the Sheriff or local emergency officials with halting traffic.

All personnel are reminded that outsiders other than emergency services will not be allowed in the response zone during the time of an emergency, and that no statements will be issued to the media or other interested parties except by the Public Information Officer. Be courteous with media representatives and direct them to the designated spokesman (PIO).

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

EXPLOSIONS AND/OR FIRE, SPECIFIC RESPONSE

According to the National Fire Protection Association Guide 325M, use dry chemical, foam or carbon dioxide. Water may be ineffective on the flames, but water should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for the persons attempting to stop the leak.

- _____ If prompt action with available firefighting equipment will put the fire out, such action should be taken, unless in the opinion of the person present, it is too hazardous to do so.
- _____ Close all valves than can be reached safely.
- _____ Notify the local fire department.
- _____ Start the notification procedures outlined in Section 2.

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

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

LINE BREAK OR LEAK, SPECIFIC RESPONSE

- _____ Notify Operations Control Center.
- _____ Shutdown pipeline as outlined in Operations and Maintenance Manual.
- _____ Obtain all the necessary information to complete the leak report.
- _____ Qualified Oil Spill Removal Organization personnel should use Combustible Gas Indicator, O_2 meter, proper colormetric indicator and/or other air sampling measurements to ensure that areas are safe to enter for continued response operations. Refer to Safety Volume for further guidance.
    - 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 storm drains, waterways, sewer systems, etc. to the greatest extent possible.
- _____ If the product enters water and a safe operating environment exists, the responders will try to contain by:
    - Deploying spill response equipment (facility and/or contract) to prevent/ mitigate spill impact (spreading of spill).
    - Attempting to divert/contain the spill:
        - In quiet area or low current areas of the water.
        - Away from strong winds or in areas that could be affected by change in wind direction.
        - Away from areas of hazard to public, property water intakes, etc.
- _____ Inform local operators such as utilities, telephone company, railway as applicable.
- _____ The responders will review 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.
- _____ The Incident Commander will determine the direction and expected duration of spill movement.
- _____ Qualified pipeline personnel will make all necessary repairs after the response is complete.

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

LINE BREAK OR LEAK, SPECIFIC RESPONSE (Cont'd)

- _____ The Oil Spill Removal Organization will clean up spilled product to eliminate any possible environmental problems.
- _____ Pipeline Management approval will return the line to services when repairs are complete.
- _____ The Pipeline Management will complete follow-up and written reporting, as the situation demands.

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

ABNORMAL PIPELINE OPERATIONS

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

Note: For more specific details, refer to the Company's Operations and Maintenance Manual.

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FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

MEDICAL EMERGENCY, SPECIFIC RESPONSE

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

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FIGURE 3.2

FLAMMABLE LIQUIDS (Non-Polar/Water-Immiscible)

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

PRODUCTS **Crude Oil**

HAZARD IDENTIFICATION / RECOGNITION

GUIDE NO. 128

DANGERS

- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.

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.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and 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.

PUBLIC SAFETY

- Isolate spill or leak area immediately for at least 50 meters (150 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 300 meters (1,000 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Information provided by the Emergency Response Guidebook 2012.

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3.2 SAFETY AWARENESS

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
MODIFIED LEVEL C Same as Level C except no APR requirements.	

3.3 EMERGENCY MEDICAL TREATMENT AND FIRST AID

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

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

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

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

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

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

4.0 RESPONSE TEAMS

4.1 INTRODUCTION

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

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

First response to an incident at the Facility will be provided by the first person discovering the spill, followed by Pipeline Management, and the VP of HSSE. The Spill Management Team will respond, to the degree necessary, to incidents exceeding local capability.

The response team will use the NIMS 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.

An explanation of ICS and the roles and responsibilities for primary members of the response teams are provided in Section 4.7. The USCG Incident Management Handbook (IMH) contains an in-depth description of all ICS positions, ICS development, response objectives and strategies, command responsibilities, ICS specific glossary/acronyms, resource typing, the IAP process, and meetings.

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 and contract with required oil spill removal organizations (OSROs).
- Activate Company personnel and equipment.
- Obligate any funds required to carry out all required or directed oil spill response activities.
- 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.

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4.3 LOCAL RESPONSE TEAM

The first Company person on scene will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more qualified management respond to the incident.

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

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 Crisis Support 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 4.7.

4.4 SPILL MANAGEMENT TEAM

For spill response operations outside the capabilities of the LRT, the QI or IC will contact the VP of HSSE who will determine the need for mobilization of the Spill Management Team (SMT).

The SMT, 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 SMT will depend on the size and complexity of the incident. During a prolonged response, additional personnel may be transferred in, and more than one level within the Team may be involved to sustain 24-hour operations.

Led by the Incident Commander, the SMT is composed of the following principal components:

- Command
- Finance
- Logistics
- Operations
- Planning

The SMT is staffed by specially trained personnel from various facility/corporate locations and various contract resources as the situation requires. Telephone references are provided in Figure 2.2.

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.

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4.5 INCIDENT COMMAND SYSTEM (ICS) (Cont'd)

- 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.
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, State, Federal, and public sector emergency response personnel
- Provide a solid cornerstone for emergency planning efforts.

Section 4.7 provides a comprehensive list of every response team member's duty assignment.

4.6 UNIFIED COMMAND

As a component of an Incident Command System, 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 Unified Command links the organizations responding to the incident and provides a forum for the Responsible Party and responding agencies to make consensus decisions. Under the Unified Command, the various jurisdictions and/or agencies and responders may blend together throughout the organization to create an integrated response team. The Incident Command System process requires the Unified Command 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

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4.6 UNIFIED COMMAND (Cont'd)

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 Unified Command. The Unified Command may change as an incident progresses, in order to account for changes in the situation.

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

- Unified Command representatives must be able to:
- Agree on common incident objectives and priorities
- Have the capability to sustain a 24-hour-7-day-per-week commitment to the incident
- Have the authority to commit agency or Company resources to the incident
- 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 Public Information Officer or Joint Information Center
- Agree on logistical support procedures
- Agree on cost-sharing procedures

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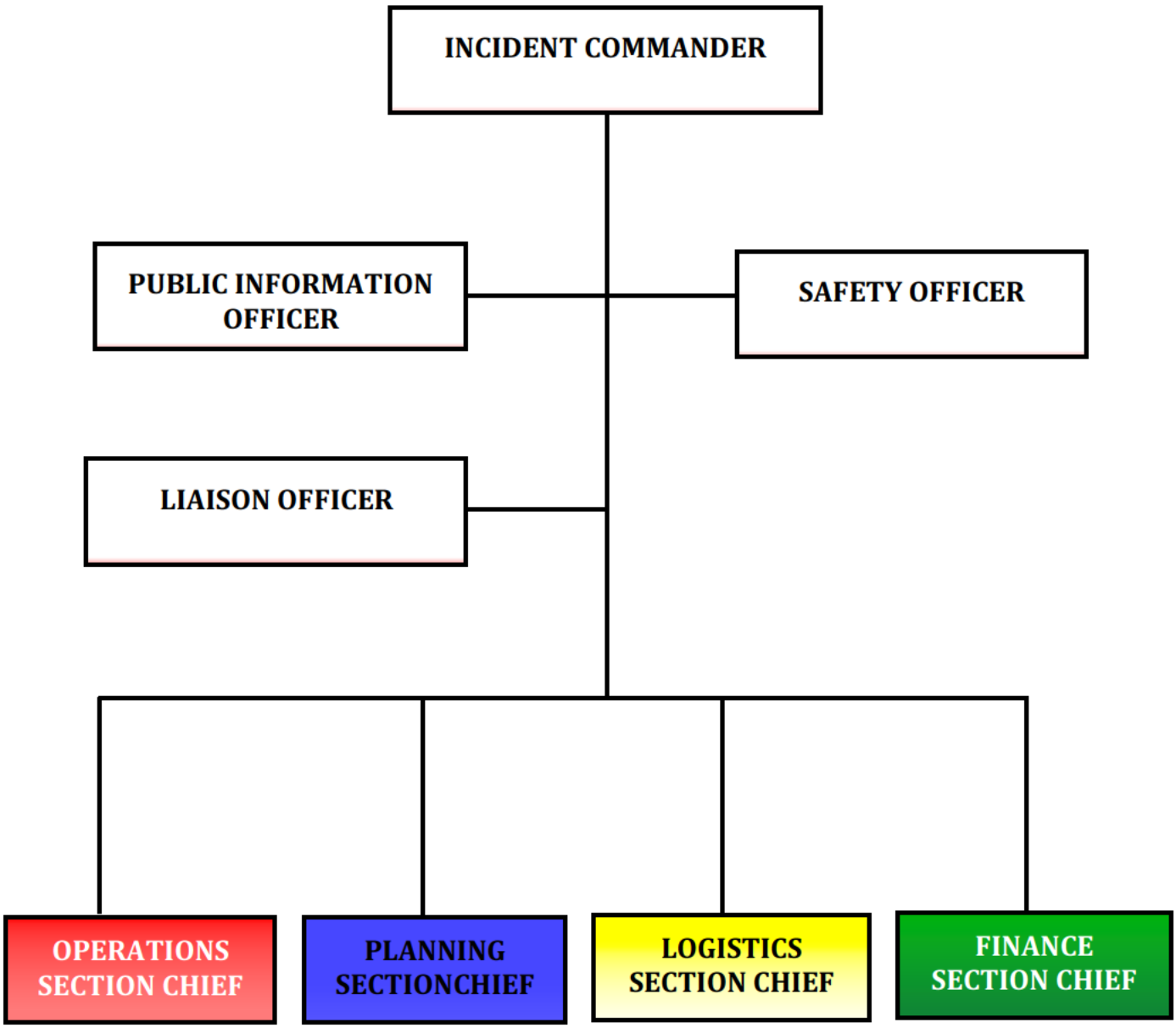
FIGURE 4.1

INCIDENT COMMAND SYSTEM



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

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4.7 ICS ROLES AND RESPONSIBILITIES

COMMON RESPONSIBILITIES

The following is a checklist applicable to all personnel in an Incident Command System organization:

- Receive assignment, including:
  - Job assignment
  - Resource order number and request number
  - Reporting location
  - Reporting time
  - Travel instructions
  - Special communications instructions
- Upon arrival, check-in at designated check-in location.
- Receive briefing from immediate supervisor.
- Acquire work materials.
- Supervisors maintain accountability for assigned personnel.
- Organize and brief subordinates.
- Know your assigned radio frequency(s) and ensure communications equipment is operating properly.
- Use clear text and Incident Command System terminology (no codes) in all communications.
- Complete forms and reports required of the assigned position and send to Documentation Unit.
- Maintain unit records, including Unit Log (ICS Form 214).
- Respond to demobilization orders and brief subordinates regarding demobilization.

UNIT LEADER RESPONSIBILITIES

In Incident Command System, a Unit Leader's responsibilities are common to all units in all parts of the organization. Common responsibilities of Unit Leaders are listed below.

- Review common responsibilities.
- Receive briefing from Incident Commander, Section Chief or Branch Director, as appropriate.
- Participate in incident planning meetings, as required.
- Determine current status of unit activities.

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4.7 ICS ROLES AND RESPONSIBILITIES (Cont'd)

UNIT LEADER RESPONSIBILITIES (Cont'd)

- Order additional unit staff, as appropriate.
- Determine resource needs.
- Confirm dispatch and estimated time of arrival of staff and supplies.
- Assign specific duties to staff; supervise staff.
- Develop and implement accountability, safety and security measures for personnel and resources.
- Supervise demobilization of unit, including storage of supplies.
- Provide Supply Unit Leader with a list of supplies to be replenished.
- Maintain unit records, including Unit Log (ICS Form 214).

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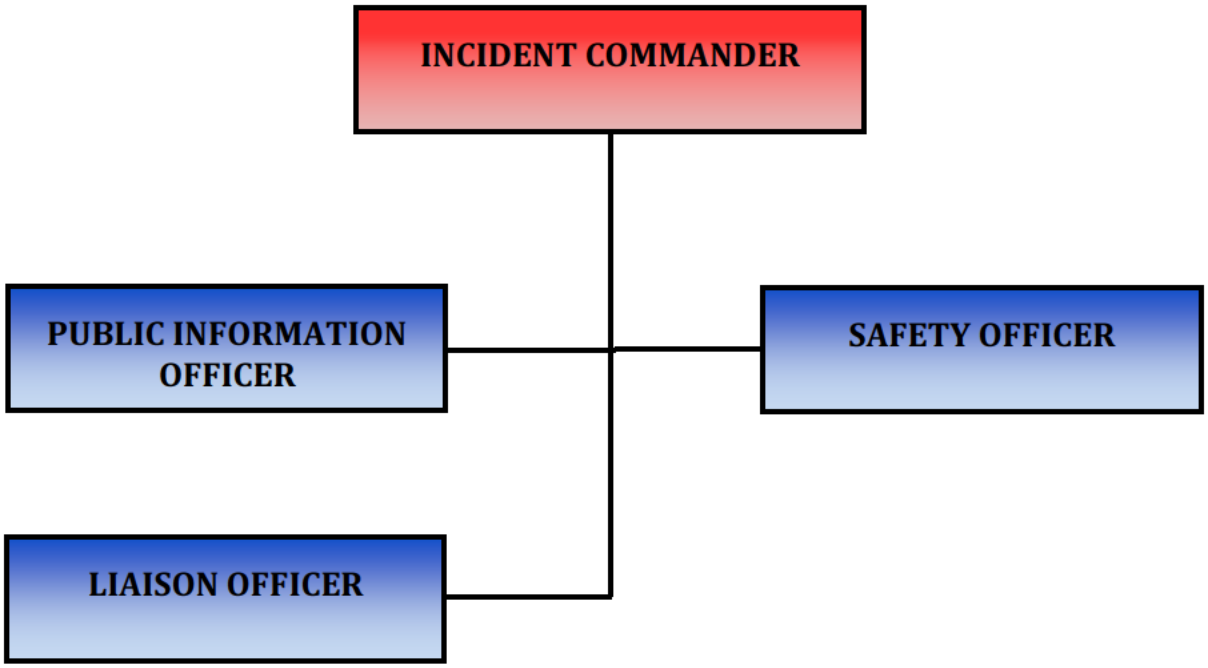
COMMAND


INCIDENT COMMANDER
PUBLIC INFORMATION OFFICER
SAFETY OFFICER
LIAISON OFFICER

INCIDENT COMMANDER

- Assess the situation and/or obtain a briefing from the prior Incident Commander.
- Determine Incident Objectives and strategy.
- Establish the immediate priorities.
- Establish an Incident Command Post.
- Brief Command Staff and Section Chiefs.
- Review meetings and briefings.
- Establish an appropriate organization.
- Ensure planning meetings are scheduled as required. (Refer to Figure 4.3 Operational Period Planning Cycle" for assistance).
- Approve and authorize the implementation of an Incident Action Plan.
- Ensure that adequate safety measures are in place.
- Coordinate activity for all Command and General Staff.
- Coordinate with key people and officials.
- Approve requests for additional resources or for the release of resources.
- Keep agency administrator informed of incident status.
- Approve the use of trainees, volunteers, and auxiliary personnel.
- Authorize release of information to the news media.
- Ensure incident Status Summary (ICS Form 209-CG) is completed and forwarded to appropriate higher authority.
- Order the demobilization of the incident when appropriate.
- Assign any of the Incident Commander roles and responsibilities to a Deputy Incident Commander as needed.

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PUBLIC INFORMATION OFFICER

- Determine from the Incident Commander if there are any limits on information release.
- Develop material for use in media briefings.
- Obtain Incident Commander approval of media releases.
- Inform media and conduct media briefings.
- Arrange for tours and other interviews or briefings that may be required.
- Obtain media information that may be useful to incident planning.
- Maintain current information summaries and/or displays on the incident and provide information on the status of the incident to assigned personnel.

LIAISON OFFICER

- Be a contact point for Agency Representatives.
- Maintain a list of assisting and cooperating agencies and Agency Representatives.
- Monitor check-in sheets daily to ensure that all Agency Representatives are identified.
- Assist in establishing and coordinating interagency contacts.
- Keep agencies supporting the incident aware of incident status.
- Monitor incident operations to identify current or potential inter-organizational problems.
- Participate in planning meetings, providing current resource status, including limitations and capability of assisting agency resources.
- Coordinate response resource needs for Natural Resource Damage Assessment and Restoration (NRDAR) activities with the Operations during oil and HAZMAT responses.
- Coordinate response resource needs for incident investigation activities with the Operations.
- Ensure that all required agency forms, reports and documents are completed prior to demobilization.
- Coordinate activities of visiting dignitaries.

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SAFETY OFFICER

- Participate in planning meetings.
- Identify hazardous situations associated with the incident.
- Review the Incident Action Plan for safety implications.
- Exercise emergency authority to stop and prevent unsafe acts.
- Investigate accidents that have occurred within the incident area.
- Review and approve the medical plan.
- Develop the Site Safety Plan and publish Site Safety Plan summary (ICS Form 208) as required.

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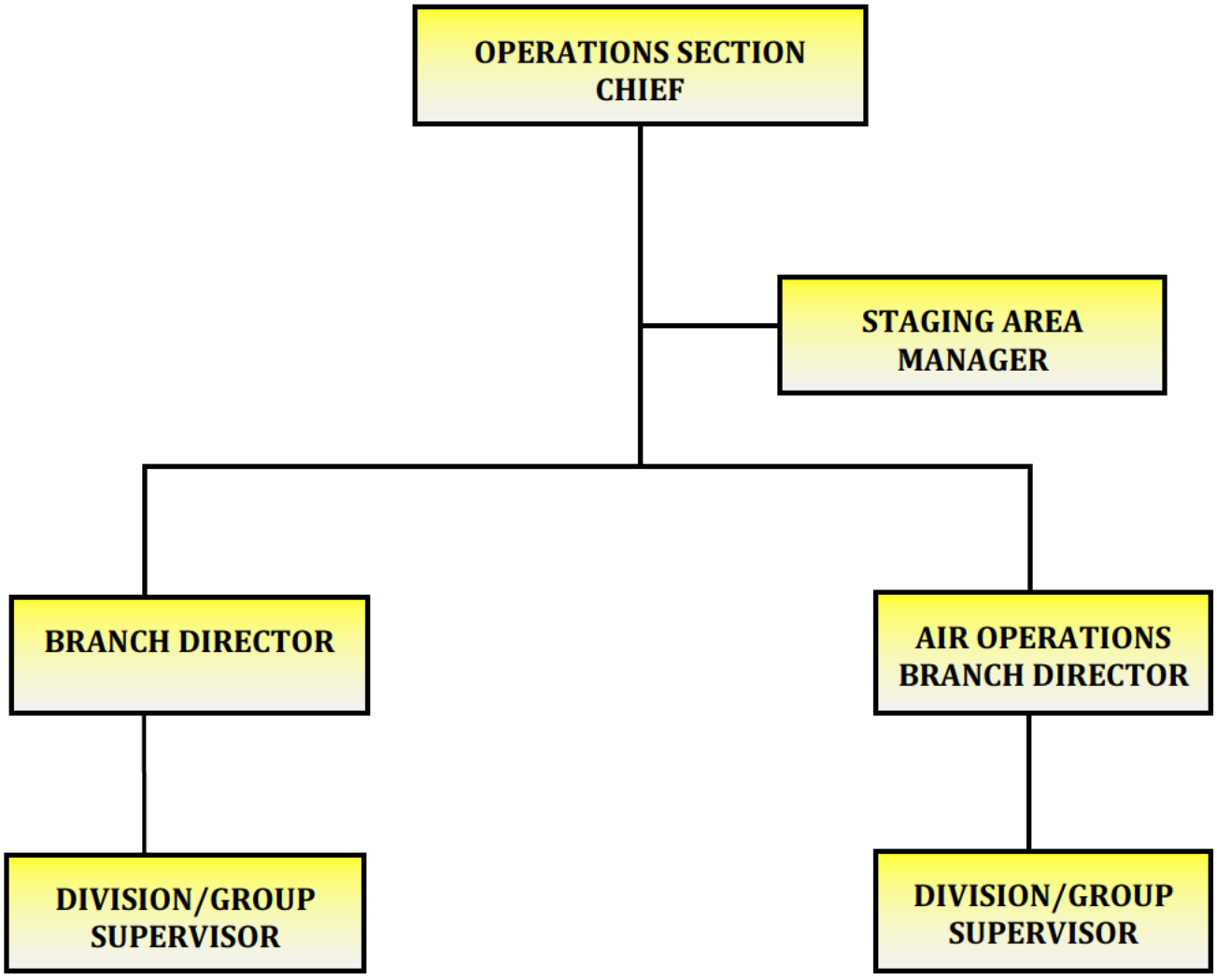
OPERATIONS


OPERATIONS SECTION CHIEF
STAGING AREA MANAGER
BRANCH DIRECTOR
AIR OPERATIONS BRANCH DIRECTOR
DIVISION/GROUP SUPERVISOR
DIVISION/GROUP SUPERVISOR

OPERATIONS SECTION GENERAL FUNCTIONS

- Responsible for managing tactical operations at the incident site directed toward reducing the immediate hazard, saving lives and property, establishing situational control, and restoring normal operations.
- Directs and coordinates all incident tactical operations.
- Executes the Incident Action Plan.

OPERATIONS SECTION CHIEF

Develop operations portion of Incident Action Plan.

- Brief and assign Operations Section personnel in accordance with the Incident Action Plan.
- Supervise Operations Section.
- Determine need and request additional resources.
- Review suggested list of resources to be released and initiate recommendation for release of resources.
- Assemble and disassemble strike teams assigned to the Operations Section.
- Report information about special activities, events, and occurrences to the Incident Commander.
- Respond to resource requests in support of National Resource Damage Assessment and Restoration activities.

BRANCH DIRECTOR

- Develop with subordinates alternatives for Branch control operations.
- Attend planning meetings at the request of the Operations.
- Review Assignment List (ICS Form 204-CG) for Divisions/Groups within the Branch.
- Modify lists based on effectiveness of current operations.
- Assign specific work tasks to Division/Group Supervisors.
- Supervise Branch operations.
- Resolve logistic problems reported by subordinates.
- Report to Operations when: the Incident Action Plan is to be modified; additional resources are needed; surplus resources are available; or hazardous situations or significant events occur.
- Approve accident and medical reports originating within the Branch.

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DIVISION/GROUP SUPERVISOR

- Implement Incident Action Plan for Division/Group.
- Provide the Incident Action Plan to Strike Team Leaders, when available.
- Identify increments assigned to the Division/Group.
- Review Division/Group assignments and incident activities with subordinates and assign tasks.
- Ensure that the Incident Commander and/or Resources Unit is advised of all changes in the status of resources assigned to the Division/Group.
- Coordinate activities with adjacent Division/Group.
- Determine need for assistance on assigned tasks.
- Submit situation and resources status information to the Branch Director or the Operations.
- Report hazardous situations, special occurrences, or significant events (e.g., accidents, sickness, discovery of unanticipated sensitive resources) to the immediate supervisor.
- Ensure that assigned personnel and equipment get to and from assignments in a timely and orderly manner.
- Resolve logistics problems within the Division/Group.
- Participate in the development of Branch plans for the next operational period.

STAGING AREA MANAGER

- Establish Staging Area layout.
- Determine any support needs for equipment, feeding, sanitation and security.
- Establish check-in function as appropriate.
- Post areas for identification and traffic control.
- Request maintenance service for equipment at Staging Area as appropriate.
- Respond to request for resource assignments.
- Obtain and issue receipts for radio equipment and other supplies distributed and received at Staging Area.
- Determine required resource levels from the Operations.

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STAGING AREA MANAGER (Cont'd)

- Advise the Operations when reserve levels reach minimums.
- Maintain and provide status to Resource Unit of all resources in Staging Area.
- Demobilize Staging Area in accordance with the Incident Demobilization Plan.

AIR OPERATIONS BRANCH DIRECTOR

- Organize preliminary air operations.
- Request declaration (or cancellation) of restricted air space
- Participate in preparation of the Incident Action Plan through the Operations. Insure that the air operations portion of the Incident Action Plan takes into consideration the Air Traffic Control requirements of assigned aircraft.
- Perform operational planning for air operations.
- Prepare and provide Air Operations Summary (ICS Form 220) to the Air Support Group and Fixed-Wing Bases.
- Determine coordination procedures for use by air organization with ground Branches, Divisions, or Groups.
- Coordinate with appropriate Operations Section personnel.
- Supervise all air operations activities associated with the incident.
- Evaluate helibase locations.
- Establish procedures for emergency reassignment of aircraft.
- Schedule approved flights of non-incident aircraft in the restricted air space area.
- Coordinate with the Operations Coordination Center (OCC) through normal channels on incident air operations activities.
- Inform the Air Tactical Group Supervisor of the air traffic situation external to the incident.
- Consider requests for non-tactical use of incident aircraft.
- Resolve conflicts concerning non-incident aircraft.
- Coordinate with Federal Aviation Administration.
- Update air operations plans.

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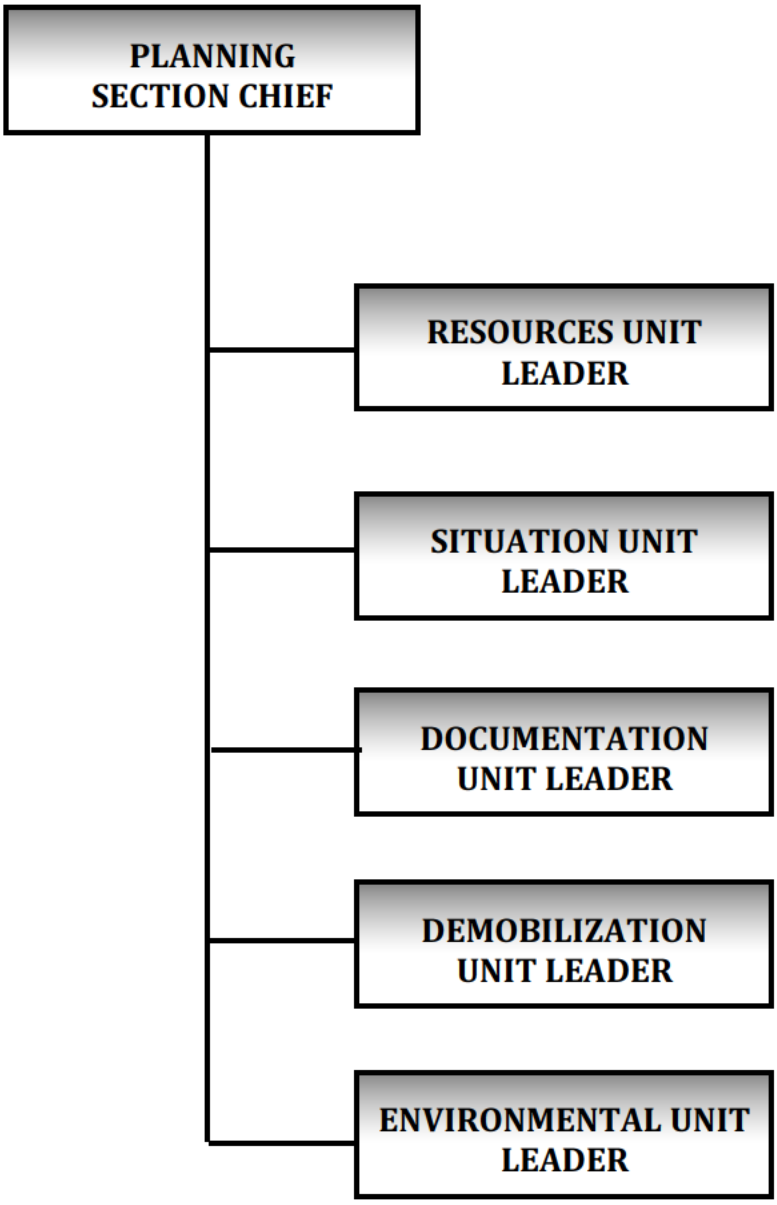
AIR OPERATIONS BRANCH DIRECTOR (Cont'd)

- Report to the Operations on air operations activities.
- Report special incidents/accidents.
- Arrange for an accident investigation team when warranted.

PLANNING


PLANNING SECTION CHIEF
RESOURCES UNIT LEADER
SITUATION UNIT LEADER
DOCUMENTATION UNIT LEADER
DEMOBILIZATION UNIT LEADER
ENVIRONMENTAL UNIT LEADER

PLANNING SECTION GENERAL FUNCTIONS

- Responsible for gathering, evaluating, and disseminating tactical information and intelligence critical to the incident.
- Maintaining incident documentation and providing documentation services.
- Preparing and documenting Incident Action Plans.
- Conducting long-range and/or contingency planning.
- Developing alternative strategies.
- Tracking resources assigned to the incident.
- Developing plans for waste disposal.
- Developing plans for demobilization.

PLANNING SECTION CHIEF

- Collect and process situation information about the incident.
- Supervise preparation of the Incident Action Plan.
- Provide input to the Incident Commander and the Operations in preparing the Incident Action Plan.
- Chair planning meetings and participate in other meetings as required. (Refer to Figure 4.2 "Operational Period Planning Cycle" for assistance.
- Reassign out-of-service personnel already on-site to Incident Command System organizational positions as appropriate.
- Establish information requirements and reporting schedules for Planning Section Units (e.g., Resources, Situation Units).
- Determine the need for any specialized resources in support of the incident.
- If requested, assemble and disassemble Strike Teams and Task Forces not assigned to Operations.
- Establish special information collection activities as necessary (e.g., weather, environmental, toxics, etc.).
- Assemble information on alternative strategies.
- Provide periodic predictions on incident potential.

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PLANNING SECTION CHIEF (Cont'd)

- Report any significant changes in incident status.
- Compile and display incident status information.
- Oversee preparation and implementation of the Incident Demobilization Plan.
- Incorporate plans (e.g., Traffic, Medical, Communications, Site Safety) into the Incident Action Plan.

RESOURCES UNIT LEADER

- Establish the check-in function at incident locations.
- Prepare Organization Assignment List (ICS Form 203-CG) and Incident Organization (ICS Form 207-CG).
- Prepare appropriate parts of Assignment List (ICS Form 204).
- Prepare and maintain the Incident Command Post display (to include organization chart and resource allocation and deployment).
- Maintain and post the current status and location of all resources.
- Maintain master roster of all resources checked in at the incident.

SITUATION UNIT LEADER

- Begin collection and analysis of incident data as soon as possible.
- Prepare, post, or disseminate resource and situation status information as required, including special requests.
- Prepare periodic predictions or as requested by the Planning Section Chief.
- Prepare the Incident Status Summary (ICS Form 209-CG).
- Provide photographic services and maps if required.

DOCUMENTATION UNIT LEADER

- Set up work area; begin organization of incident files.
- Establish duplication service; respond to requests.
- File all official forms and reports.

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DOCUMENTATION UNIT LEADER (Cont'd)

- Review records for accuracy and completeness; inform appropriate units of errors or omissions.
- Provide incident documentation as requested.
- Store files for post-incident use.

DEMOBILIZATION UNIT LEADER

- Participate in planning meetings as required.
- Review incident resource records to determine the likely size and extent of demobilization effort.
- Based on the above analysis, add additional personnel, workspace, and supplies as needed.
- Coordinate demobilization with Agency Representatives.
- Monitor the on-going Operations Section resource needs.
- Identify surplus resources and probable release time.
- Develop incident check-out function for all units.
- Evaluate logistics and transportation capabilities to support demobilization.
- Establish communications with off-incident facilities, as necessary.
- Develop an Incident Demobilization Plan detailing specific responsibilities and release priorities and procedures.
- Prepare appropriate directories (e.g., maps, instructions, etc.) for inclusion in the demobilization plan.
- Distribute demobilization plan (on and off-site).
- Provide status reports to appropriate requestors.
- Ensure that all Sections/Units understand their specific demobilization responsibilities.
- Supervise execution of the Incident Demobilization Plan.
- Brief the Planning Section Chief on demobilization progress.

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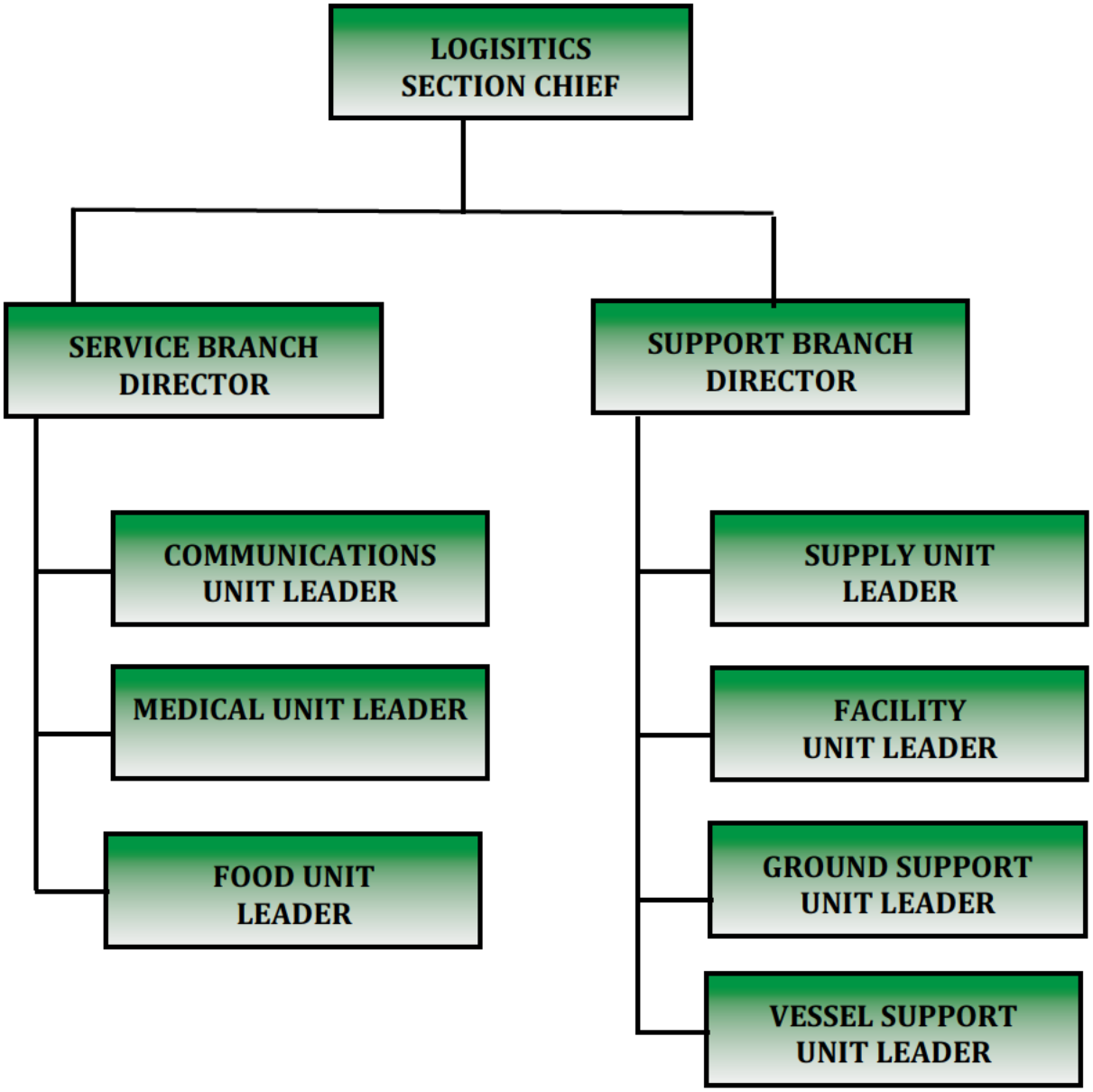
ENVIRONMENTAL UNIT LEADER

- Participate in Planning Section meetings.
- Identify sensitive areas and recommend response priorities.
- Following consultation with natural resource trustees, provide input on wildlife protection strategies (e.g., removing oiled carcasses, pre-emptive capture, hazing, and/or capture and treatment).
- Determine the extent, fate and effects of contamination.
- Acquire, distribute and provide analysis of weather forecasts.
- Monitor the environmental consequences of cleanup actions.
- Develop shoreline cleanup and assessment plans. Identify the need for, and prepare any special advisories or orders.
- Identify the need for, and obtain, permits, consultations, and other authorizations including Endangered Species Act (ESA) provisions.
- Following consultation with the Federal On-Scene Coordinator's Historical/Cultural Resources Technical Specialist identify and develop plans for protection of affected historical/cultural resources.
- Evaluate the opportunities to use various response technologies.
- Develop disposal plans.
- Develop a plan for collecting, transporting, and analyzing samples.

LOGISTICS



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LOGISTICS SECTION GENERAL FUNCTIONS

- Responsible for all support requirements needed to facilitate effective and efficient incident management, including ordering resources from off-incident locations.
- Ordering, obtaining, maintaining, and accounting for essential personnel, equipment, and supplies.
- Providing communication planning and resources.
- Setting up food services.
- Setting up and maintaining incident facilities.
- Providing support transportation.
- Providing medical services to incident personnel.

LOGISTICS SECTION CHIEF

- Plan the organization of the Logistics Section.
- Assign work locations and preliminary work tasks to Section personnel.
- Notify the Resources Unit of the Logistics Section units activated including names and locations of assigned personnel.
- Assemble and brief Branch Directors and Unit Leaders.
- Participate in preparation of the Incident Action Plan.
- Identify service and support requirements for planned and expected operations.
- Provide input to and review the Communications Plan, Medical Plan and Traffic Plan.
- Coordinate and process requests for additional resources.
- Review the Incident Action Plan and estimate Section needs for the next operational period.
- Advise on current service and support capabilities.
- Prepare service and support elements of the Incident Action Plan.
- Estimate future service and support requirements.
- Receive Incident Demobilization Plan from Planning Section.
- Recommend release of Unit resources in conformity with Incident Demobilization Plan.
- Ensure the general welfare and safety of Logistics Section personnel.

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SERVICE BRANCH DIRECTOR

- Determine the level of service required to support operations.
- Confirm dispatch of Branch personnel.
- Participate in planning meetings of Logistics Section personnel.
- Review the Incident Action Plan.
- Organize and prepare assignments for Service Branch personnel.
- Coordinate activities of Branch Units.
- Inform the Logistic Section Chief of Branch activities.
- Resolve Service Branch problems.

COMMUNICATIONS UNIT LEADER

- Prepare and implement the Incident Radio Communications Plan (ICS Form 205-CG).
- Ensure the Incident Communications Center and the Message Center is established.
- Establish appropriate communications distribution/maintenance locations within the Base/Camp(s).
- Ensure communications systems are installed and tested.
- Ensure an equipment accountability system is established.
- Ensure personal portable radio equipment from cache is distributed per Incident Radio Communications Plan.
- Provide technical information as required on:
  - Adequacy of communications systems currently in operation.
  - Geographic limitation on communications systems.
  - Equipment capabilities/limitations.
  - Amount and types of equipment available.
  - Anticipated problems in the use of communications equipment.
- Supervise Communications Unit activities.
- Maintain records on all communications equipment as appropriate.
- Ensure equipment is tested and repaired.
- Recover equipment from Units being demobilized.

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MEDICAL UNIT LEADER

- Participate in Logistics Section/Service Branch planning activities.
- Prepare the Medical Plan (ICS Form 206-CG).
- Prepare procedures for major medical emergency.
- Declare major emergency as appropriate.
- Respond to requests for medical aid, medical transportation, and medical supplies.
- Prepare and submit necessary documentation.

FOOD UNIT LEADER

- Determine food and water requirements.
- Determine the method of feeding to best fit each facility or situation.
- Obtain necessary equipment and supplies and establish cooking facilities.
- Ensure that well-balanced menus are provided.
- Order sufficient food and potable water from the Supply Unit.
- Maintain an inventory of food and water.
- Maintain food service areas, ensuring that all appropriate health and safety measures are being followed.
- Supervise caterers, cooks, and other Food Unit personnel as appropriate.

SUPPORT BRANCH DIRECTOR

- Determine initial support operations in coordination with the Logistic Section Chief and Service Branch Director.
- Prepare initial organization and assignments for support operations.
- Assemble and brief Support Branch personnel.
- Determine if assigned Branch resources are sufficient.
- Maintain surveillance of assigned units work progress and inform the Logistic Section Chief of their activities.
- Resolve problems associated with requests from the Operations Section.

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SUPPLY UNIT LEADER

- Participate in Logistics Section/Support Branch planning activities.
- Determine the type and amount of supplies en route.
- Review the Incident Action Plan for information on operations of the Supply Unit.
- Develop and implement safety and security requirements.
- Order, receive, distribute, and store supplies and equipment.
- Receive and respond to requests for personnel, supplies, and equipment.
- Maintain an inventory of supplies and equipment.
- Service reusable equipment.
- Submit reports to the Support Branch Director.

FACILITY UNIT LEADER

- Review the Incident Action Plan.
- Participate in Logistics Section/Support Branch planning activities.
- Determine requirements for each facility, including the Incident Command Post.
- Prepare layouts of incident facilities.
- Notify Unit Leaders of facility layout.
- Activate incident facilities.
- Provide Base and Camp Managers and personnel to operate facilities.
- Provide sleeping facilities.
- Provide security services.
- Provide facility maintenance services (e.g., sanitation, lighting, clean up).
- Demobilize Base and Camp facilities.
- Maintain facility records.

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GROUND SUPPORT UNIT LEADER

- Participate in Support Branch/Logistics Section planning activities.
- Develop and implement the Traffic Plan.
- Support out-of-service resources.
- Notify the Resources Unit of all status changes on support and transportation vehicles.
- Arrange for and activate fueling, maintenance, and repair of ground resources.
- Maintain Support Vehicle Inventory and transportation vehicles (ICS Form 218).
- Provide transportation services, In accordance with requests from the Logistic Section Chief or Support Branch Director.
- Collect information on rented equipment.
- Requisition maintenance and repair supplies (e.g., fuel, spare parts).
- Maintain incident roads.
- Submit reports to Support Branch Director as directed.

VESSEL SUPPORT UNIT LEADER

- Participate in Support Branch/Logistics Section planning activities.
- Coordinate development of the Vessel Routing Plan.
- Coordinate vessel transportation assignments with the Protection and Recovery Branch or other sources of vessel transportation.
- Coordinate water-to-land transportation with the Ground Support Unit, as necessary.
- Maintain a prioritized list of transportation requirements that need to be scheduled with the transportation source.
- Support out-of-service vessel resources, as requested.
- Arrange for fueling, dockage, maintenance and repair of vessel resources, as requested.
- Maintain inventory of support and transportation vessels.

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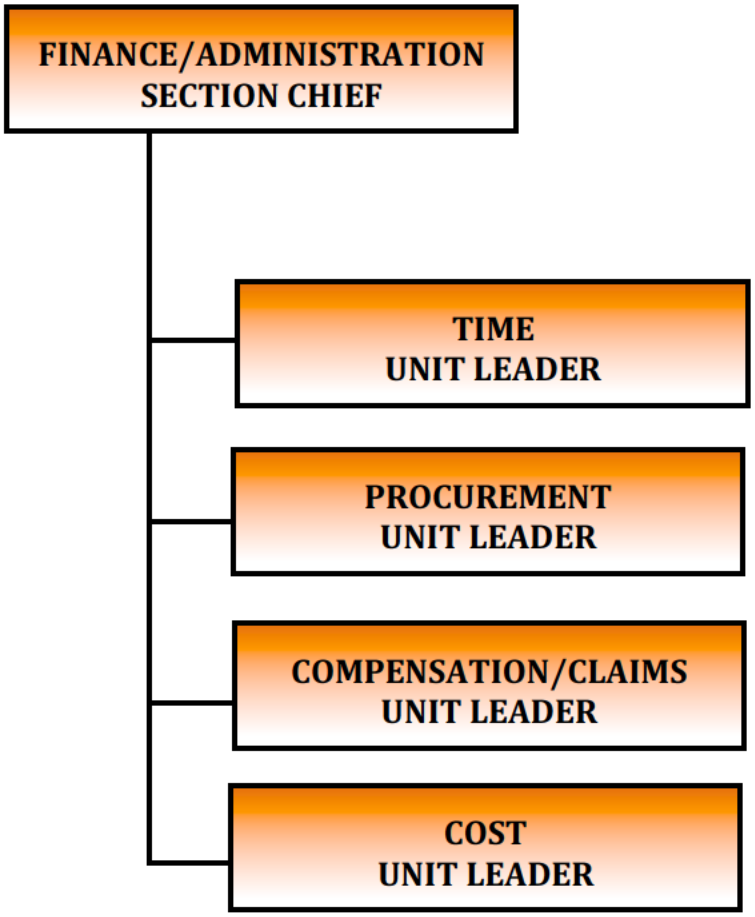
FINANCE/ADMINISTRATION



FINANCE/ADMINISTRATION SECTION GENERAL FUNCTIONS

- Responsible for all financial and cost analysis aspects of an incident. (Note: Not all incidents will require a separate Finance/Administration Section. In cases that require only one specific function (e.g., cost analysis), this service may be provided by a member of the Planning Section.)
- Administering any contract negotiation.
- Providing cost analysis as it pertains to the Incident Action Plan.
- Maintaining cost associated with the incident.
- Tracking personnel and equipment time.
- Addressing compensation for injury or damage to property issues.

FINANCE/ADMINISTRATION SECTION CHIEF

- Attend planning meetings as required.
- Manage all financial aspects of an incident.
- Provide financial and cost analysis information as requested.
- Gather pertinent information from briefings with responsible agencies.
- Develop an operating plan for the Finance/Administration Section; fill supply and support needs.
- Determine the need to set up and operate an incident commissary.
- Meet with assisting and cooperating agency representatives, as needed.
- Maintain daily contact with agency(s) administrative headquarters on Finance/ Administration matters.
- Ensure that all personnel time records are accurately completed and transmitted, according to policy.
- Provide financial input to demobilization planning.
- Ensure that all obligation documents initiated at the incident are properly prepared and completed.
- Brief administrative personnel on all incident-related financial issues needing attention or follow-up prior to leaving incident.

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TIME UNIT LEADER

- Determine incident requirements for time recording function.
- Determine resource needs.
- Contact appropriate agency personnel/representatives.
- Ensure that daily personnel time recording documents are prepared and in compliance with policy.
- Establish time unit objectives.
- Maintain separate logs for overtime hours.
- Establish commissary operation on larger or long-term incidents as needed.
- Submit cost estimate data forms to the Cost Unit, as required.
- Maintain records security.
- Ensure that all records are current and complete prior to demobilization.
- Release time reports from assisting agency personnel to the respective Agency Representatives prior to demobilization.
- Brief the Finance/Administration Section Chief on current problems and recommendations, outstanding issues, and follow-up requirements.

PROCUREMENT UNIT LEADER

- Review incident needs and any special procedures with Unit Leaders, as needed.
- Coordinate with local jurisdiction on plans and supply sources.
- Obtain the Incident Procurement Plan.
- Prepare and authorize contracts and land-use agreements.
- Draft memoranda of understanding as necessary.
- Establish contracts and agreements with supply vendors.
- Provide for coordination between the Ordering Manager, agency dispatch, and all other procurement organizations supporting the incident.
- Ensure that a system is in place that meets agency property management requirements. Ensure proper accounting for all new property.

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PROCUREMENT UNIT LEADER (Cont'd)

- Interpret contracts and agreements; resolve disputes within delegated authority.
- Coordinate with the Compensation/Claims Unit for processing claims.
- Coordinate use of impress funds, as required.
- Complete final processing of contracts and send documents for payment.
- Coordinate cost data in contracts with the Cost Unit Leader.
- Brief the Finance/Administration Section Chief on current problems and recommendations, outstanding issues, and follow-up requirements.

COMPENSATION/CLAIMS UNIT LEADER

- Establish contact with the incident Security Officer and Liaison Officer (or Agency Representatives if no Liaison Officer is assigned).
- Determine the need for Compensation for Injury and Claims Specialists and order personnel as needed.
- Establish a Compensation for Injury work area within or as close as possible to the Medical Unit.
- Review Medical Plan (ICS Form 206-CG).
- Ensure that Compensation/Claims Specialists have adequate workspace and supplies.
- Review and coordinate procedures for handling claims with the Procurement Unit.
- Brief the Compensation/Claims Specialists on incident activity.
- Periodically review logs and forms produced by the Compensation/Claims Specialists to ensure that they are complete, entries are timely and accurate and that they are in compliance with agency requirements and policies.
- Ensure that all Compensation for Injury and Claims logs and forms are complete and routed appropriately for post-incident processing prior to demobilization.
- Keep the Finance/Administration Section Chief briefed on Unit status and activity.
- Demobilize unit in accordance with the Incident Demobilization Plan.

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COST UNIT LEADER

- Coordinate cost reporting procedures.
- Collect and record all cost data.
- Develop incident cost summaries.
- Prepare resources-use cost estimates for the Planning Section.
- Make cost-saving recommendations to the Finance/Administration Section Chief.
- Ensure all cost documents are accurately prepared.
- Maintain cumulative incident cost records.
- Complete all records prior to demobilization.
- Provide reports to the Finance/Administration Section Chief.

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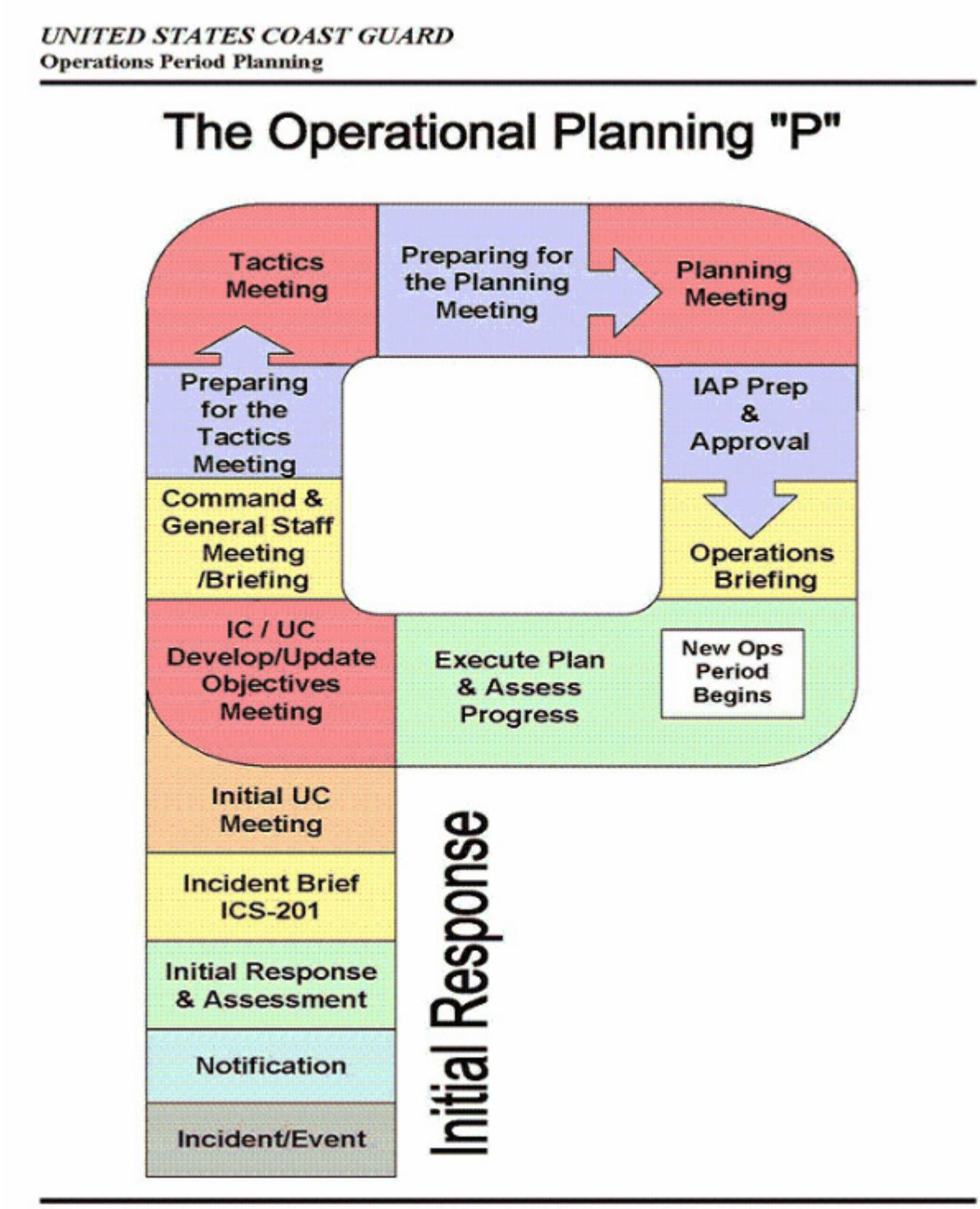
FIGURE 4.2


UNITED STATES COAST GUARD
Operations Period Planning
The Operational Planning "P"
Tactics Meeting
Preparing for the Planning Meeting
Planning Meeting
Preparing for the Tactics Meeting
IAP Prep & Approval
Command & General Staff Meeting /Briefing
Operations Briefing
IC / UC Develop/Update Objectives Meeting
Execute Plan & Assess Progress
New Ops Period Begins
Initial UC Meeting
Incident Brief ICS-201
Initial Response & Assessment
Notification
Incident/Event
Initial Response

5.0 RESPONSE PLANNING

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 this Section), 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*
201	Incident Briefing	Initial Response IC
None	ICS IAP Cover	Situation Unit Leader
202	Incident Objectives	Planning Section Chief
203	Organization Assignment List	Resources Unit Leader
204	Assignment List	Operations Section Chief & Resources Unit Leader
205	Incident Radio Communications Plan	Communications Unit Leader
206	Medical Plan	Medical Unit Leader
207	Incident Organization	Resources Unit Leader
209	Incident Status Summary	Incident Commander
214	Unit Log	Situation Unit Leader
218	Support Vehicle Inventory	Ground Support Unit Leader
220	Air Operations Summary	Air Operations Branch Director
232	Resources at Risk Summary	Situation Unit Leader
SSP	Site Safety Plan	Safety Officer

* 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.

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 E)
- Plans for use of Alternative Technologies (Dispersant/In-situ Burning/ Bioremediation)
- Security Plans
- Decontamination Plans
- Traffic Plans

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 in this Section.

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.

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ICS FORMS

NRC Incident No. #_____

1. Incident Name	**2. Prepared by:** (name) Date: Time:	INCIDENT BRIEFING ICS 201-CG

3. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)

4. Current Situation:

NRC Incident No. #_____

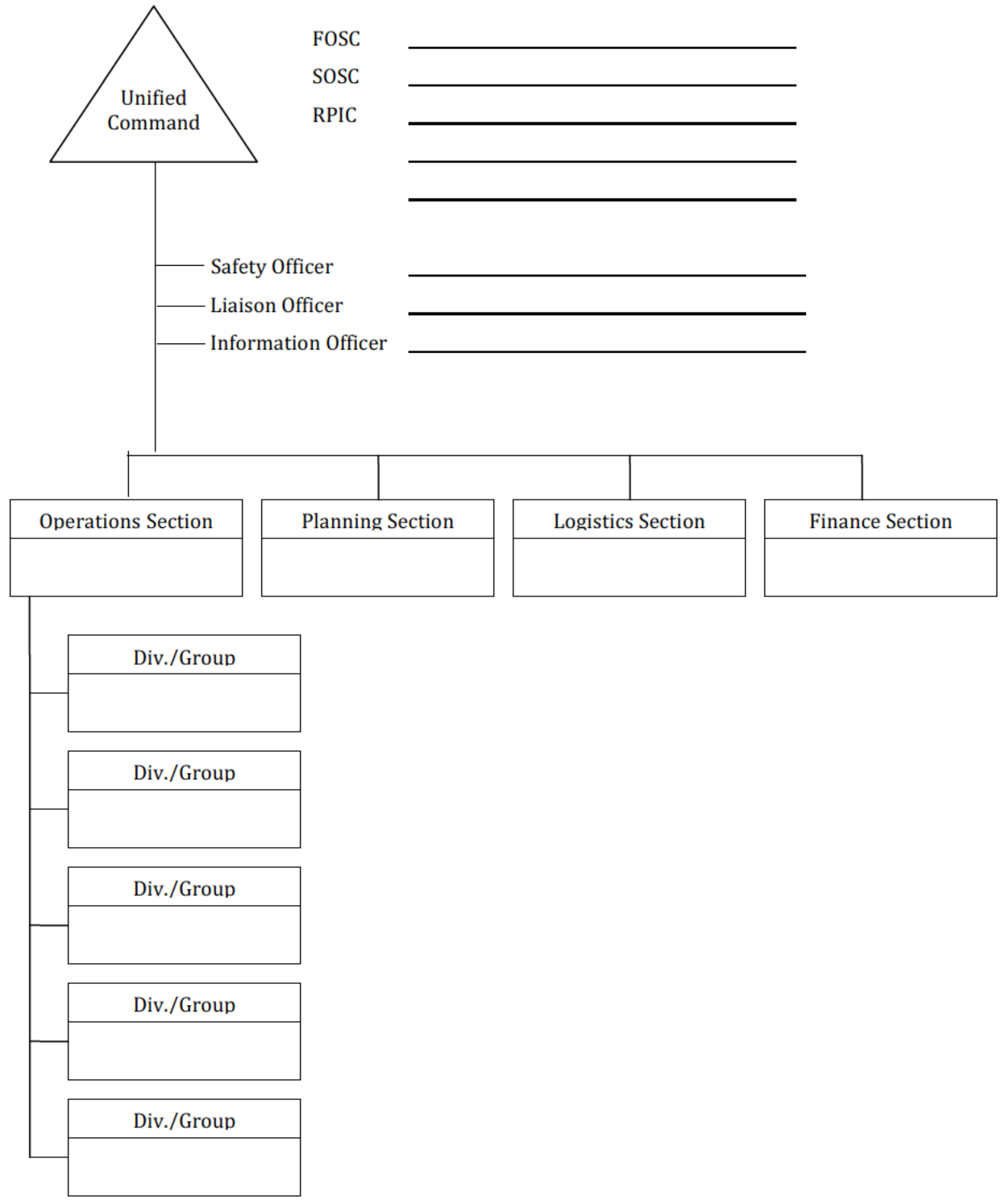
1. Incident Name	2. Prepared by: (name) Date: Time:	INCIDENT BRIEFING ICS 201-CG

5. Initial Response Objectives, Current Actions, Planned Actions

NRC Incident No. #_____

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

6. Current Organization



NRC Incident No. #________________________________

1. Incident Name	**2. Prepared by:** (name) Date: Time:	INCIDENT BRIEFING ICS 201-CG

7. Resources Summary

Resource	Resource Identifier	Date Time Ordered	ETA	On-Scene (X)	NOTES: (Location/Assignment/Status)

NRC Incident No. #_____

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

3. Approved by Incident Commander(s):

ORG	NAME

INCIDENT ACTION PLAN

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

☐ ICS 202-CG (Response Objectives)

☐ ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)

☐ ICS 204-CGs (Assignment Lists)
One Copy each of any ICS 204-CG attachments:

☐ ICS 205-CG (Communications Plan)

☐ ICS 206-CG (Medical Plan)

☐ ICS 208-CG (Site Safety Plan) or Note SSP Location _____

☐ Map/Chart

☐ Weather forecast / Tides/Currents

Other Attachments

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

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

NRC Incident No. #_____

1. Incident Name	**2. Operational Period (Date/Time)** From: To:	**INCIDENT OBJECTIVES** **ICS 202-CG**

3. Objective(s)

4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)

Approved Site Safety Plan Located at:

5. Prepared by: (Planning Section Chief) **Date/Time**

NRC Incident No. #_____

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

3. Incident Commander(s) and Staff

Agency	IC	Deputy

Safety Officer:	
Information Officer:	
Liaison Officer:	

4. Agency Representatives

Agency	Name

5. PLANNING/INTEL SECTION

Chief	
Deputy	
Resources Unit	
Situation Unit	
Environmental Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. LOGISTICS SECTION

Chief	
Deputy	

a. Support Branch

Director	
Supply Unit	
Facilities Unit	
Vessel Support Unit	
Ground Support Unit	

b. Service Branch

Director	
Communications Unit	
Medical Unit	
Food Unit	

7. OPERATION SECTION

Chief		
Deputy		
Deputy		
Staging Area Manager		
Staging Area Manager		
Staging Area Manager		

a. Branch – Division Groups

Branch Director		
Deputy		
Division Group	⊥	
Division Group	⊥	
Division Group		
Division/Group		
Division/Group		

b. Branch – Division/Groups

Branch Director		
Deputy		
Division/Group	⊥	
Division/Group	⊥	
Division/Group	⊥	
Division/Group		
Division/Group		

c. Branch – Division/Groups

Branch Director		
Deputy		
Division/Group		
Division/Group	⊥	
Division/Group		
Division/Group		
Division/Group		

d. Air Operations Branch

Air Operations Br. Dir	
Helicopter Coordinator	

8. FINANCE/ADMINISTRATION SECTION

Chief	
Deputy	
Time Unit	
Procurement Unit	
Compensation/Claims Unit	
Cost Unit	

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

NRC Incident No. #_____

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

3. Incident Commander(s) and Staff

Agency	IC	Deputy

Safety Officer:	
Information Officer:	
Liaison Officer:	

4. Agency Representatives

Agency	Name

5. PLANNING/INTEL SECTION

Chief	
Deputy	
Resources Unit	
Situation Unit	
Environmental Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. LOGISTICS SECTION

Chief	
Deputy	
a. Support Branch	
Director	
Supply Unit	
Facilities Unit	
Vessel Support Unit	
Ground Support Unit	
b. Service Branch	
Director	
Communications Unit	
Medical Unit	
Food Unit	

7. OPERATION SECTION

Chief		
Deputy		
Deputy		
Staging Area Manager		
Staging Area Manager		
Staging Area Manager		
a. Branch – Division Groups		
Branch Director		
Deputy		
Division Group	⊥	
Division Group	⊥	
Division Group		
Division/Group		
Division/Group		
b. Branch – Division/Groups		
Branch Director		
Deputy		
Division/Group	⊥	
Division/Group	⊥	
Division/Group	⊥	
Division/Group		
Division/Group		
c. Branch – Division/Groups		
Branch Director		
Deputy		
Division/Group		
Division/Group	⊥	
Division/Group		
Division/Group		
Division/Group		
d. Air Operations Branch		
Air Operations Br. Dir		
Helicopter Coordinator		

8. FINANCE/ADMINISTRATION SECTION

Chief	
Deputy	
Time Unit	
Procurement Unit	
Compensation/Claims Unit	
Cost Unit	

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

NRC Incident No. #_____

1. Incident Name	2. Operational Period (Date/Time) From: To:	**Assignment List** **ICS 204-CG**
3. Branch	**4. Division/Group/Staging**	

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: _____

Branch Director: _____

Division/Group Supervisor/STAM: _____

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

8. Special Instructions

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

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

NRC Incident No. #_____

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

NRC Incident No. #_____

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

3. BASIC RADIO CHANNEL USE

SYSTEM / CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS

4. Prepared by: (Communications Unit) **Date / Time**

INCIDENT RADIO COMMUNICATIONS PLAN

NRC Incident No. #_____

1. Incident Name	**2. Operational Period (Date / Time)** From: To:	**COMMUNICATIONS LIST** **ICS 205A-CG**

3. Basic Local Communications Information

Assignment	Name	Method(s) of contact (radio frequency, phone, pager, cell #(s), etc.)

4. Prepared by: (Communications Unit) **Date / Time**

NRC Incident No. #_____

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

3. Medical Aid Stations

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

4. Transportation

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

5. Hospitals

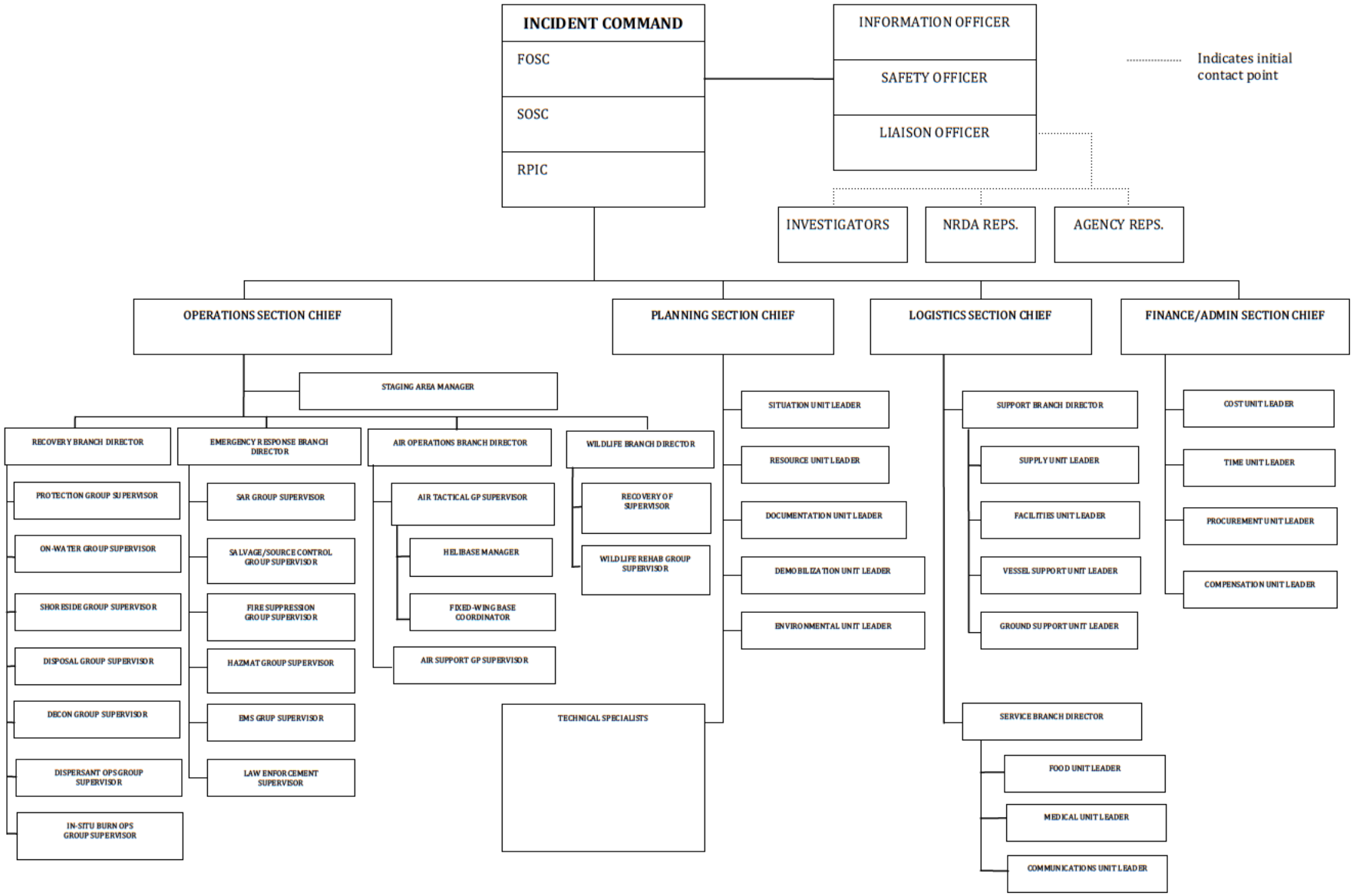
Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		

6. Special Medical Emergency Procedures

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

NRC Incident No. #_____

1. Incident Name	2. Operational Period (Date/Time) From: To:	INCIDENT ORGANIZATION CHART ICS 207-CG



NRC Incident No. #_____

1. Incident Name	2. Operational Period (Date / Time) From: To: Time of Report	INCIDENT STATUS SUMMARY ICS 209-CG

3. Type of Incident

☐	Oil Spill	☐	HAZMAT	☐	AMIO
☐	SAR/Major SAR T	☐	SI/Terrorism	☐	Natural Disaster
☐	Marine Disaster	☐	Civil Disturbance	☐	Military Outload
☐	Planned Event	☐	Maritime HLS/Prevention	☐	

4. Situation Summary as of Time of Report:

5. Future Outlook/Goals/Needs/Issues:

6. Safety Status/Personnel Casualty Summary

	Since Last Report	Adjustments To Previous Op Period	Total
Responder Injury			
Responder Death			
Public Missing (Active Search)			
Public Missing (Presumed Lost)			
Public Uninjured			
Public Injured			
Public Dead			
Total Public Involved			

7. Property Damage Summary

Vessel	$
Cargo	$
Facility	$
Other	$

8. Attachments with clarifying information

☐	Oil/HAZMAT	☐	SAR/LE	☐	
☐		☐		☐	
☐	Marine Disaster	☐	Civil Disturbance	☐	Military Outload

9. Equipment Resources					
Kind	Notes	# Ordered	# Available	# Assigned	# Out of Service
USCG Assets					
Aircraft – Helo					
Aircraft – Fixed Wing					
Vessels – USCG Cutter					
Vessels – Boat					
Vehicles – Car					
Vehicles – Truck					
Pollution Equip – VOSS/SORS					
Pollution Equip – Portable Storage					
Pollution Equip – Boom					
Non-CG/Other Assets					
Aircraft – Helo					
Aircraft – Fixed Wing					
Vessels – SAR/LE Boat					
Vessels – Work/Crew Boat					
Vessels – Tug/Tow Boat					
Vessels – Pilot Boat					
Vessels – Deck Barge					
Vessels –					
Vehicles – Car					
Vehicles – Ambulance					
Vehicles – Truck					
Vehicles – Fire/Rescue/HAZMAT					
Vehicles – Vac/Tank Truck					
Vehicles –					
Pollution Equip – Skimmers					
Pollution Equip – Tank Vsl/ Barge					
Pollution Equip – Portable Storage					
Pollution Equip – OSRV					
Pollution Equip – Boom					
Pollution Equip –					

10. Personnel Resources	
Agency	**Total # of People**
USCG	
DHS (other than USCG)	
NOAA	
FBI	
DOD (USN Supsalv, CST, etc.)	
DOI (US Fish & Wildlife, Nat Parks, BLM, etc.)	
RP	
State	
Local	
Total Personnel Resources Used From all Organizations:	

11. Prepared by:	Date/Time Prepared:

NRC Incident No. #_____

1. Incident Name	2. Operational Period (Date / Time) From: To: Time of Report	ICS 209-CG OIL/HAZMAT ATTACHMENT

3. HAZMAT/Oil Spill Status (Estimated, in gallons)

Common Name(s):

UN Number:	☐ Secured ☐ Unsecured
CAS Number:	Remaining Potential (bbl):
	Rate of Spillage (bbl/hr):

	Adjustments To Previous Operational Period	Since Last Report	Total
Volume Spilled/Released			
Mass Balance - HAZMAT/Oil Budget			
Recovered HAZMAT/Oil			
Evaporation/Airborne			
Natural Dispersion			
Chemical Dispersion			
Burned			
Floating, Contained			
Floating, Uncontained			
Onshore			
Total HAZMAT/Oil accounted for:	N/A	N/A	

Comments:

4. HAZMAT/Oil Waste Management (Estimated, Since Last Report)

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

Comments:

5. HAZMAT/Oil Shoreline Impacts (Estimated in miles)

Degree of Impact	Affected	Cleaned	To Be Cleaned
Light			
Medium			
Heavy			
Total			

Comments:

6. HAZMAT/Oil Wildlife Impacts (Since Last Report)

					Died in Facility	
Type of Wildlife	Captured	Cleaned	Released	DOA	Euthanized	Other
Birds						
Mammals						
Reptiles						
Fish						
Total						

Comments:

7. Prepared by:	Date/Time Prepared:

NRC Incident No. #_____

1. Incident Name	2. Operational Period (Date / Time) From: To: Time of Report	ICS 209-CG SAR/LE ATTACHMENT

3. Evacuation Status

	Since Last Report	Adjustments To Previous Operational Period	Total
Total to be Evacuated			
Number Evacuated			

4. Migrant Interdiction Status

	Since Last Report	Adjustments To Previous Op Period	Total
Vessels Interdicted			
Migrants Interdicted at Sea			
Migrants Interdicted Ashore			
Injured			
MEDEVAC'd			
Deaths			
Migrants Repatriated			

5. Sorties/Patrols Summary (List of Sorties Since Last Report)

Air	Since Last Report	Total
Number of Sorties/Patrols		
Area Covered (square miles)		
Total Time On-Scene (In Hours)		
Surface	Since Last Report	Total
Number of Sorties/Patrols		
Area Covered (square miles)		
Total Time On-Scene (In Hours)		

6. Use of Force Summary

Category	Since Last Report	Total
III - Soft Empty Hand Control		
IV - Hard Empty Hand Control		
V - Intermediate Weapons		
VI - Deadly Force		
VSL - Force to Stop Vessel from Cutter/Boat		
A/C - Force to Stop Vessel From Aircraft		
Arrests		
Seizures		
Deaths		

7. Operational Controls Summary

Currently In Force

Type	Initiating Unit	Initiated Date	Activity #

Removed Since Last Report

Type	Initiating Unit	Initiated Date	Date Removed	Activity #

18. Prepared by:	Date/Time Prepared:

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

5. Personnel Assigned

NAME	ICS POSITION	HOME BASE

6. Activity Log (Continue on Reverse)

TIME	MAJOR EVENTS

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

1. Incident Name	2. Operational Period (Date/Time) From: To:	UNIT LOG (CONT.) ICS 214-CG

6. Activity Log (Continue on Reverse)

TIME	MAJOR EVENTS

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

SUPPORT VEHICLE INVENTORY ICS 218	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED

VEHICLE INFORMATION

a. TYPE	b. MAKE	c. CAPACITY/SIZE	d. AGENCY/OWNER	e. I.D. NO.	f. LOCATION	g. RELEASE TIME

ICS 218	PAGE	5. PREPARED BY (GROUND SUPPORT UNIT)

1. Incident Name	2. Operational Period (Date / Time) From: To:	AIR OPERATIONS SUMMARY ICS 220-CG

3. Distribution

☐ Fixed-Wing Bases _____ ☐ Helibase _____

4. Personnel and Communications

	Air Operations Director	Air / Air Frequency	Air / Ground Frequency
Air Operations Director			
Air Tactical Supervisor			
Air Support Supervisor			
Helicopter Coordinator			
Fixed-Wing Coordinator			

5. Remarks (Spec. Instructions, Safety Notes, Hazards, Priorities)

6. Location / Function	7. Assignment	8. Fixed-Wing		9. Helicopter		10. Time		11. Aircraft Assigned	12. Operating Base
		NO.	TYPE	NO.	TYPE	Available	Commence		
	13. TOTALS								

14. Air Operation Support Equipment

15. Prepared by **Date / Time**

NRC Incident No. #_____

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**

NRC Incident No. #_____

SITE SAFETY PLAN

I. General - Spill / Release

☐ Land ☐ Air ☐ Water ☐ HAZMAT ☐ Other: _____

Facility: _____

Location: _____

Objectives: _____

Operational Period: **Date** _____ **Time**: _____ **to** _____

II. Hazards to be Evaluated

Y	N		Y	N	
☐	☐	Oxygen Deficient/Enriched	☐	☐	Chemical/MSDS # _____
☐	☐	Flammable Atmosphere	☐	☐	Physical Site Hazard _____
☐	☐	Toxic Atmosphere: _____	☐	☐	Traffic _____
☐	☐	Boat Operations	☐	☐	Other* (see comments) _____

III. Weather

Skies: _____ Tide: _____ Water Temperature: _____

Temperature: _____ Current: _____ Kts. Current Direction: _____

Wind Velocity: _____ Wind Direction: _____

IV. Control Measures

Isolation & Lockout (Identify items to be locked out): _____

Decon: _____

Ventilation: ☐ Natural ☐ Mechanical: _____ Continuous: ☐ No ☐ Yes

Flagman/Watchman: _____

V. Testing & Monitoring (Check required items)

Tests are to be performed in the order listed.

Y	N		Continuous	Frequency
☐	☐	Oxygen Level	☐Y ☐N	___ every ___
☐	☐	LEL	☐Y ☐N	___ every ___
☐	☐	Hydrogen Sulfide	☐Y ☐N	___ every ___
☐	☐	Benzene	☐Y ☐N	___ every ___
☐	☐	VOC: _____ ☐Y	☐N	___ every ___
☐	☐	Other: _____ ☐Y	☐N	___ every ___

ACCEPTABLE ENTRY CONDITIONS

	SPECIAL WORK PRACTICES OR PPE REQUIRED	WORK EFFORTS SHOULD BE DIRECTED AT REDUCING CONCENTRATIONS
19.5 – 22.0% in air*	< 19.5% or 22.0% in air*	<16.0 or ≥ 23.5% in air
< 10% in air	≥ 10.0 but < 20.0% in air†	≥ 20.0% in air
< 10 ppm	≥ 10 but < 100 ppm	≥ 100 ppm
< 1 ppm	≥ 1 but < 3000 ppm	≥ 3000 ppm

As allowed by applicable standard(s) *Acceptable for 5325 feet of elevation and below.

†Hot work is not permitted when LEL is greater than 10% in air.

VI. Required Personal Protective Equipment (Check for required use)

General	Eye Prot.	Respiratory Prot.	Hearing Prot.	Gloves	Footwear	Clothing
☐ Hard Hat	☐ Safety Glasses	☐ SCBA/Air Line w/Escape	☐ Ear Plugs	☐ Leather	☐ Steel-toes	☐ FR Coveralls
☐ Safety Harness	☐ Goggles	☐ Air Line	☐ Ear Muffs	☐ Rubber	☐ Rubber	☐ Level A
☐ PFD	☐ Face-shield	☐ Air Purifying (Full Mask)	☐ Combination	☐ Nitrile	☐ Hip-boots	☐ Level B
	☐ Tinted Lens	Cartridge Type: ☐ OV ☐ Hepa-OVV		☐ PVC	☐ Chemical Resistant	☐ Level C
				☐ _____	☐ _____	☐ Level D

Any other special PPE: _____

VII. Emergency Information and Rescue Services

Emergency Contact Person: _____ Contact by: _____

Fire Department: _____ Contact by: _____

Ambulance: _____ Contact by: _____

Hospital: _____ Contact by: _____

Rescue Services: _____ Contact by: _____

(if not provided by above)

VIII. Required Safety & Rescue Equipment (on site)

☐ Lights ☐ Fall Protection ☐ First Aid Kit ☐ Drinking Water ☐ Fire Extinguisher ☐ Tripod ☐ *Other:* _____

☐ Ladder ☐ Retrieval Lines ☐ Defibrillator ☐ *Communication Method* _____

NRC Incident No. #_____

IX. Comments or Special Work Procedures

_____

_____

_____

_____

X. Report All Injuries Immediately - "Notify Site Safety Officer"

Radio Channel: _____ Radio Frequency: _____ Telephone No. _____

Call 911 if life threatening

XI. Monitoring Results	Zone													
Oxygen	Time													
	Level													
	By													
LEL	Time													
	Level													
	By													
Hydrogen Sulfide	Time													
	Level													
	By													
Benzene	Time													
	Level													
	By													
VOC	Time													
	Level													
	By													
	Time													
	Level													
	By													
	Time													
	Level													
	By													
	Time													
	Level													
	By													
	Time													
	Level													
	By													

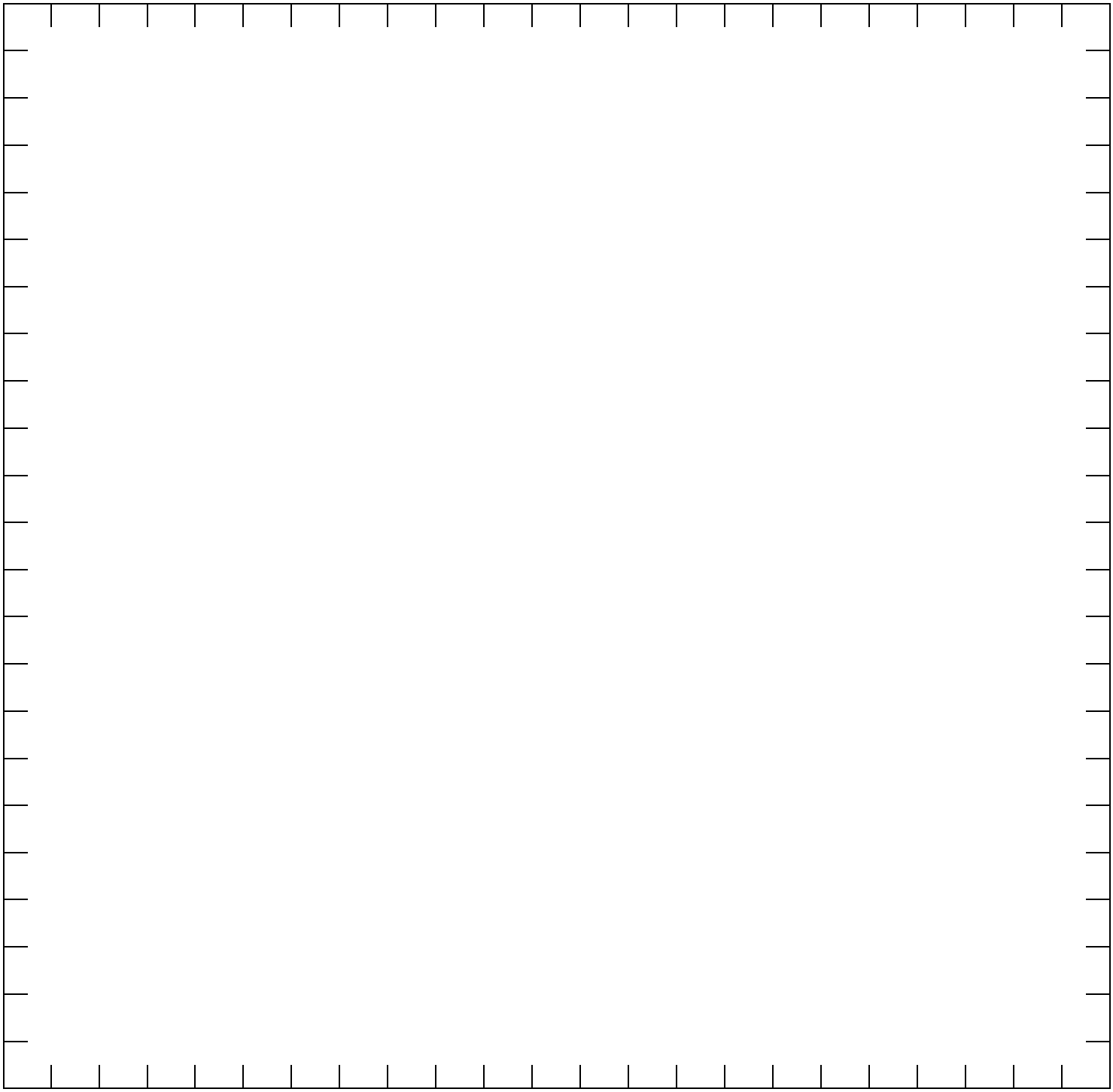
Equipment: Type: _____ Mnfter: _____ Calibration / Expiration: _____

Type: _____ Mnfter: _____ Calibration / Expiration: _____

NRC Incident No. #_____

XII. Work Area Diagram

Please include wind direction, exclusion zone, support zone, decon area and significant landmarks.



NRC Incident No. #____________________

XIII. Crew Signatures from Specific Location: ____________________

Print Name	Signature	Time In	Time Out	Reviewed SSP	
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
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				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*
				☐ *Yes*	*Initial:*

XIV. Authorizing Signature

Site Manager: Printed Name: ____________________ **Signature**: ____________________

I hereby acknowledge and authorize the above work to be performed in accordance with the conditions outlined on this permit. If the work procedures or conditions change creating any unsafe conditions, then this permit is void and work is to be suspended. I understand and affirm that the conditions of this work permit will be followed prior to and during entry into a confined space. I also agree to order the work to be stopped and the confined space evacuated in the event that conditions of the permitted work area fail to meet the permit requirements.

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

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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 Endangered/Threatened Species

The U.S. Fish and Wildlife Service (USFWS) and related state agencies classify the status of various wildlife species in the potentially effected states. A summary of critical birds, reptiles, mammals, and plant species status as related to the Pipeline's operating areas (area of highest oil spill potential) is presented in Figure 6.1.

6.3.2 Wildlife Rescue

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

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

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

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6.3 WILDLIFE PROTECTION AND REHABILITATION (Cont'd)

6.3.3 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.

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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:

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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.

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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. If the floating skimmer starts picking up excess water (slick becomes thin), do not stop using it if it is not removing any appreciable amount of product.

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

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

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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.

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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 % across the pool to decrease the effective water velocity beneath it. Also, it helps to concentrate the product at the bank and not all along the barrier. A second barrier should be placed approximately 10 to 15 feet downstream of the first one as a secondary back-up.

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

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

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

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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.

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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 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.

  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.

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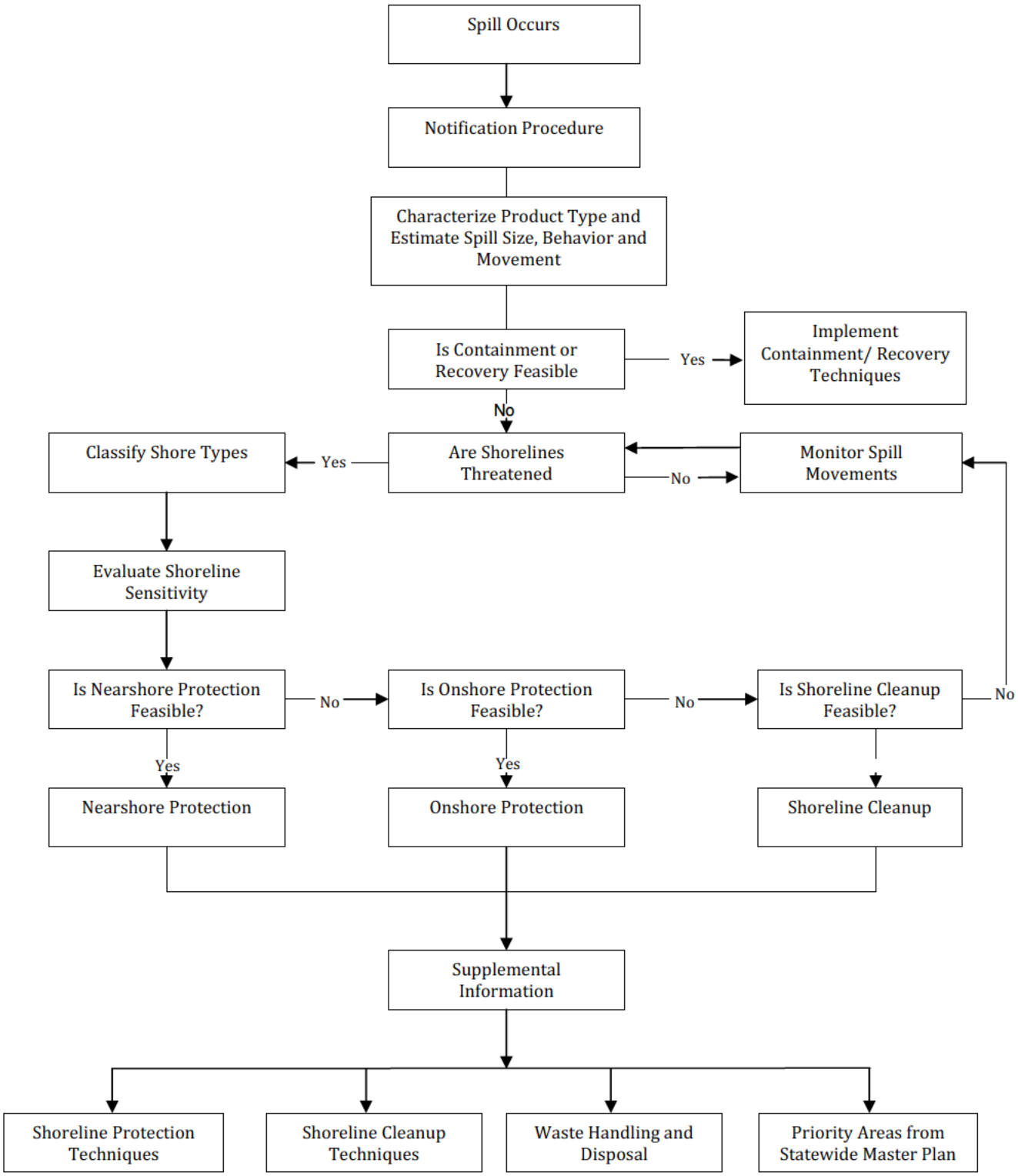
FIGURE 6.1

ON WATER RESPONSE FLOWCHART



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6.6 VULNERABILITY ANALYSIS

The thorough examination of published Area Contingency Plans (ACPs) was conducted to identify sensitive areas in all the response zones. The following resources provided detailed information on sensitivities and possibly methods for containing them:

- U.S. Coast Guard - Sector Los Angeles - Long Beach Area Contingency Plan.

6.7 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.

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FIGURE 6.2

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

The following is a listing of the endangered and threatened animals and plants and wildlife species of special concern in the State of California.

ANIMALS	
COMMON NAME	**SCIENTIFIC NAME**
Abalone, White North America (Along West Coast from Point Conception, CA, USA, to Punta Abreojos, Baja California, Mexico)	*Hailotis* sorenseni
Albatross, short-tailed	*Phoebastria (=Diomedea) albatrus*
Bear, grizzly lower 48 states, except where listed as an experimental population or delisted	*Ursus arctos horribilis*
Beetle, delta green ground	*Elaphrus viridis*
Beetle, Mount Hermon June	*Polyphylla barbata*
Beetle, valley elderberry longhorn	*Desmocerus californicus dimorphus*
Butterfly, bay checkerspot	*Euphydryas editha bayensis*
Butterfly, Behren's silverspot	*Speyeria zerene behrensii*
Butterfly, callippe silverspot	*Speyeria callippe callippe*
Butterfly, El Segundo blue	*Euphilotes battoides allyni*
Butterfly, Lange's metalmark	*Apodemia mormo langei*
Butterfly, lotis blue	*Lycaeides argyrognomon lotis*
Butterfly, mission blue	*Icaricia icarioides missionensis*
Butterfly, Myrtle's silverspot	*Speyeria zerene myrtleae*
Butterfly, Oregon silverspot	*Speyeria zerene hippolyta*
Butterfly, Palos Verdes blue	*Glaucopsyche lygdamus paolsverdesensis*
Butterfly, Quino checkerspot	*Euphydryas editha quino (=E. e. wrighti)*
Butterfly, San Bruno elfin	*Callophrys mossii bayensis*
Butterfly, Smith's blue	*Euphilotes enoptes smithi*
Chub, bonytail entire	*Gila elegans*
Chub, Mohave tui	*Gila bicolor mohavensis*
Chub, Owens tui	*Gila bicolor snyderi*
Condor, California USA only	*Gymnogyps californianus*
Crayfish, Shasta	*Pacifastacus fortis*
Curlew, Eskimo	*Numenius borealis*
Fairy shrimp, Conservancy	*Branchinecta conservation*
Fairy shrimp, longhorn	*Brachinecta longiantenna*
Fairy shrimp, Riverside	*Streptocephalus woottoni*
Fairy shrimp, San Diego	*Branchinecta sandiegonensis*
Fairy shrimp, vernal pool	*Brachinecta lynchi*
Fly, Delhi Sands flower-loving	*Rhaphiomidas terminates abdominalis*
Flycatcher, southwestern willow	*Empidonax traillii extimus*
Fox, San Joaquin kit	*Vulpes macrotis mutica*
Fox, San Miguel Island	*Urocyon littoralis littoralis*
Fox, Santa Catalina Island	*Urocyon littoralis catalinae*
Fox, Santa Cruz Island	*Urocyon littoralis santacruzae*
Fox, Santa Rosa Island	*Urocyon littoralis santarosae*
Frog, California red-legged subspecies range clarified	*Rana aurora draytonii*

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FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

ANIMALS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Frog, mountain yellow-legged southern California DPA	*Rana muscosa*
Gnatcatcher, coastal California	*Polioptila californica californica*
Goby, tidewater Entire	*Eucyclogobius newberryi*
Grasshopper, Zayante band-winged	*Trimerotropis infantilis*
Jaguar	*Panthera onca*
Kangaroo rat, Fresno	*Dipodomys nitratoides exilis*
Kangaroo rat, giant	*Dipodomys ingens*
Kangaroo rat, Morro Bay	*Dipodomys heermanni morroensis*
Kangaroo rat, San Bernardino Merriam's	*Dipodomys merriami parvus*
Kangaroo rat, Stephens'	*Dipodomys stephensi (incl. D. cascus)*
Kangaroo rat, Tipton	*Dipodomys nitratoides nitratoides*
Lizard, blunt-nosed leopard	*Gambelia silus*
Lizard, Coachella Valley fringe-toed	*Uma inornata*
Lizard, Island night	*Xantusia riversiana*
Moth, Kern primrose sphinx	*Euproserpinus euterpe*
Mountain beaver, Point Arena	*Aplodontia rufa nigra*
Mouse, Pacific pocket	*Perognathus longimembris pacificus*
Mouse, salt marsh harvest	*Reithrodontomys raviventris*
Murrelet, marbled CA, OR, WA	*Brachyramphus marmoratus*
Otter, southern sea except where EXPN	*Enhydra lutris nereis*
Owl, northern spotted	*Strix occidentalis caurina*
Pelican, brown except US Atlantic coast, FL, AL	*Pelecanus occidentalis*
Pikeminnow (=squawfish), Colorado except Salt and Verde R. drainages, AZ	*Ptychocheilus lucius*
Plover, western snowy Pacific coastal pop.	*Charadrius alexandrines nivosus*
Pupfish, desert	*Cyprinodon macularius*
Pupfish, Owens	*Cyprinodon radiosus*
Rabbit, riparian brush	*Sylvilagus bachmani riparius*
Rail, California clapper	*Rallus longirostris obsoletus*
Rail, light-footed clapper USA only	*Rallus longirostris levipes*
Rail, Yuma clapper USA only	*Rallus longirostris yumanensis*
Salamander, California tiger USA (CA - Santa Barbara County)	*Ambystoma californiense*
Salamander, California tiger USA (CA - Sonoma County)	*Ambystoma californiense*
Salamander, California tiger USA (Central CA DPS)	*Ambystoma californiense*
Salamander, desert slender	*Batrachoseps aridus*
Salamander, Santa Cruz long-toed	*Ambystoma macrodactylum croceum*
Salmon, chinook CA Central Valley spring-run	*Oncorhynchus (=Salmo) tshawytscha*
Salmon, chinook CA coastal	*Oncorhynchus (=Salmo) tshawytscha*
Salmon, Chinook winter Sacramento R.	*Oncorhynchus (=Salmo) tshawytscha*
Salmon, coho OR, CA pop.	*Oncorhynchus (=Salmo) kisutch*
Salmon, coho central CA coast	*Oncorhynchus (=Salmo) kisutch*
Sea turtle, green except where endangered	*Chelonia mydas*

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FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

ANIMALS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Sea turtle, leatherback	*Dermochelys coriacea*
Sea turtle, loggerhead	*Caretta caretta*
Sea turtle, olive ridley except where endangered	*Lepidochelys olivacea*
Sea-lion, Stellar eastern pop.	*Eumetopias jubatus*
Sea-lion, Stellar western pop.	*Eumetopias jubatus*
Seal, Guadalupe fur	*Arctocephalus townsendi*
Sheep, Peninsular bighorn Peninsular CA pop.	*Ovis Canadensis nelsoni*
Sheep, Sierra Nevada bighorn Sierra Nevada	*Ovis Canadensis sierra*
Shrew, Buena Vista Lake ornate	*Sorex ornatus relictus*
Shrike, San Clemente loggerhead	*Lanius ludovicianus mearnsi*
Shrimp, California freshwater	*Syncaris pacifica*
Skipper, Carson wandering	*Pseudocopaeodes eunus obscures*
Skipper, Laguna Mountains	*Pyrgus ruralis lagunae*
Smelt, delta	*Hypomesus transpacificus*
Snail, Morro shoulderband (=Banded dune)	*Helminthoglypta walkeriana*
Snake, giant garter	*Thamnophis gigas*
Snake, San Francisco garter	*Thamnophis sirtalis tetrataenia*
Sparrow, San Clemente sage	*Amphispiza belli clementeae*
Steelhead Central Valley CA	*Oncorhynchus (=Salmo) mykiss*
Steelhead central CA coast	*Oncorhynchus (=Salmo) mykiss*
Steelhead northern CA	*Oncorhynchus (=Salmo) mykiss*
Steelhead south central CA coast	*Oncorhynchus (=Salmo) mykiss*
Steelhead southern CA coast	*Oncorhynchus (=Salmo) mykiss*
Stickleback, unarmored threespine	*Gasterosteus aculeatus williamsoni*
Sturgeon, North American green USA (CA) Southern Distinct Population Segment	*Acipenser medirostris*
Sucker, Lost River	*Deltistes luxatus*
Sucker, Modoc	*Catostomus microps*
Sucker, razorback entire	*Xyrauchen texanus*
Sucker, Santa Ana 3 CA river basins	*Catostomus santaanae*
Sucker, shortnose	*Chasmistes brevirostris*
Tadpole shrimp, vernal pool	*Lepidurus packardi*
Tern, California least	*Sterna antillarum browni*
Tiger beetle, Ohlone	*Cicindela ohlone*
Toad, arroyo (=arroyo southwestern)	*Bufo californicus (=microscaphus)*
Tortoise, desert USA, except in Sonoran Desert	*Gopherus agassizii*
Towhee, Inyo California	*Pipilo crissalis eremophilus*
Trout, bull USA, conterminous, lower 48 states	*Slavelinus confluentus*
Trout, Lahontan cutthroat	*Oncorhynchus clarki henshawi*
Trout, Little Kern golden	*Oncorhynchus aguabonita whitei*
Trout, Paiute cutthroat	*Oncorhynchus clarki seleniris*
Vireo, least Bell's	*Vireo bellii pusillus*
Vole, Amargosa	*Microtus californicus scirpensis*
Whale, blue	*Balaenoptera musculus*
Whale, finback	*Balaenoptera physalus*

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FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

ANIMALS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Whale, humpback	*Megaptera novaeangliae*
Whale, killer Southern Resident DPS	*Orcinus orca*
Whale, Sei	*Balaenoptera borealis*
Whale, sperm	*Physeter catodon (=macrocephalus)*
Wolf, gray in lower 48 States, except where delisted and where EXPN Mexico.	*Canis lupus*
Woodrat, riparian (=San Joaquin Valley)	*Neotoma fuscipes riparia*

PLANTS	
COMMON NAME	**SCIENTIFIC NAME**
Allocarya, Calistoga	*Plagiobothrys strictus*
Alopecurus, Sonoma	*Alepecurus aequalis var. sonomensis*
Ambrosia, San Diego	*Ambrosia pumila*
Amole, purple	*Chlorogalum purpureum*
Baccharis, Encinitas	*Baccharis vanessae*
Barberry, island	*Berberis pinnata ssp. insularis*
Barberry, Nevin's	*Berberis nevinii*
Bedstraw, El Dorado	*Galium californicum ssp. sierrae*
Bedstraw, island	*Galium buxifolium*
Bird's beak, palmate-bracted	*Cordylanthus palmatus*
Bird's-beak, Pennell's	*Cordylanthus tenuis ssp. capillaris*
Bird's-beak, salt marsh	*Cordylanthus maritimus ssp. maritimus*
Bird's-beak, soft	*Cordylanthus mollis ssp. mollis*
Bladderpod, San Bernardino Mountains	*Lesquerella kingie ssp. bernardina*
Bluecurls, Hidden Lake	*Trichostema austromontanum ssp. compactum*
Bluegrass, Napa	*Poa napensis*
Bluegrass, San Bernardino	*Poa atropurpurea*
Brodiaea, Chinese Camp	*Brodiaea pallid*
Brodiaea, thread-leaved	*Brodiaea filifolia*
Broom, San Clemente Island	*Lotus dendroideus ssp. traskiae*
Buckwheat, cushenbury	*Eriogonum ovalifolium var. vineum*
Buckwheat, lone (incl. Irish Hill)	*Eriogonum apricum (incl. var. prostratum)*
Bush-mallow, San Clemente Island	*Malacothamnus clementinus*
Bush-mallow, Santa Cruz Island	*Malacothamnus fasciculatus var. nesioticus*
Butterweed, Layne's	*Senecio layneae*
Button-celery, San Diego	*Eryngium aristulatum var. parishii*
Cactus, Bakersfield	*Opuntia treleasei*
Ceanothus, coyote	*Ceanothus ferrisae*
Ceanothus, Pine Hill	*Ceanothus roderickii*
Ceanothus, Vail Lake	*Ceanothus ophiochilus*
Centaury, spring-loving	*Centaurium namophilum*
Checker-mallow, Keck's	*Sidalcea keckii*
Checker-mallow, Kenwood Marsh	*Sidalcea oregana ssp. valida*
Checker-mallow, pedate	*Sidalcea pedata*

FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

PLANTS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Clarkia, Pismo	*Clarkia speciosa ssp. Immaculate*
Clarkia, Presidio	*Clarkia franciscana*
Clarkia, Springville	*Clarkia springvillensis*
Clarkia, Vine Hill	*Clarkia imbricate*
Clover, Monterey	*Trifolium trichocalyx*
Clover, showy Indian	*Trifolium amoenum*
Crownbeard, big-leaved	*Verbesina dissita*
Crownscale, San Jacinto Valley	*Atriplex coronata var. notatior*
Cypress, Gowen	*Cupressus goveniana ssp. goveniana*
Cypress, Santa Cruz	*Cupressus abramsiana*
Daisy, Parish's	*Erigeron parishii*
Dudleya, Conejo	*Dudleya abramsii ssp. parva*
Dudleya, marcescent	*Dudleya cymosa ssp. marcescens*
Dudleya, Santa Clara Valley	*Dudleya setchellii*
Dudleya, Santa Cruz Island	*Dudleya nesiotica*
Dudleya, Verity's	*Dudleya verityi*
Dudleyea, Santa Monica Mountains	*Dudleya cymosa ssp. ovatifolia*
Dwarf-flax, Marin	*Hesperolinon congestum*
Evening-primrose, Antioch Dunes	*Oenothera deltoides ssp. howellii*
Evening-primrose, Eureka Valley	*Oenothera avita ssp. eurekensis*
Evening-primrose, San Benito	*Camissonia benitensis*
Fiddleneck, large-flowered	*Amsinckia grandiflora*
Flannelbush, Mexican	*Fremontodendron mexicanum*
Fringepod, Santa Cruz Island	*Thysanocarpus conchuliferus*
Gilia, Hoffmann's slender-flowered	*Gilia tenuiflora ssp. hoffmannii*
Gilia, Monterey	*Gilia tenuiflora ssp. arenaria*
Goldfields, Burke's	*Lasthenia burkei*
Goldfields, Contra Costa	*Lasthenia conjugens*
Grass, Colusa	*Neostapfia colusana*
Grass, Eureka Dune	*Swallenia alexandrae*
Grass, Solano	*Tuctoria mucronata*
Gumplant, Ash Meadows	*Grindelia fraxino-pratensis*
Howellia, water	*Howellia aquatilis*
Indian paintbrush, San Clemente Island	*Castilleja grisea*
Jewelflower, California	*Caulanthus californicus*
Jewelflower, Metcalf Canyon	*Streptanthus albidus ssp. albidus*
Jewelflower, Tiburon	*Streptanthus niger*
Larkspur, Baker's	*Delphinium bakeri*
Larkspur, San Clemente Island	*Delphinium variegatum ssp. kinkiense*
Larkspur, yellow	*Delphinium luteum*
Layia, beach	*Layia carnosa*
Lessingia, San Francisco	*Lessingia germanorum (=L.g. var. germanorum)*
Lily, Pitkin Marsh	*Lilium pardalinum ssp. pitkinense*
Lily, Western	*Lilium occidentale*
Liveforever, Laguna Beach	*Dudleya stolonifera*

FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

PLANTS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Liveforever, Santa Barbara Island	*Dudleya traskiae*
Lupine, clover	*Lupinus tidestromii*
Lupine, Nipomo Mesa	*Lupinus nipomensis*
Malacothrix, island	*Malacothrix squalida*
Malacothrix, Santa Cruz Island	*Malacothrix indecora*
Mallow, Kern	*Eremalche kernensis*
Manzanita, Del Mar	*Arctostaphylos glandulosa ssp. crassifolia*
Manzanita, Ione	*Arctostaphylos myrtifolia*
Manzanita, Morro	*Arctostaphylos morroensis*
Manzanita, pallid	*Arctostaphylos pallida*
Manzanita, Presidio	*Arctostaphylos hookeri var. ravenii*
Manzanita, Santa Rosa Island	*Arctostaphylos confertiflora*
Mariposa lily, Tiburon	*Calochortus tiburonensis*
Meadowfoam, Butte County	*Limnanthes floccosa ssp. californica*
Meadowfoam, Sebastopol	*Limnanthes vinculans*
Mesa-mint, Otay	*Pogogyne nudiuscula*
Mesa-mint, San Diego	*Pogogyne abramsii*
Milk-vetch, Braunton's	*Astragalus brauntonii*
Milk-vetch, Clara Hunt's	*Astragalus clarianus*
Milk-vetch, Coachella Valley	*Astragalus lentiginosus var. coachellae*
Milk-vetch, coastal dunes	*Astragalus tener var. titi*
Milk-vetch, Cushenbury	*Astragalus albens*
Milk-vetch, Fish Slough	*Astragalus lentiginosus var. piscinensis*
Milk-vetch, Lane Mountain	*Astragalus jaegerianus*
Milk-vetch, Peirson's	*Astragalus magdalenae var. peirsonii*
Milk-vetch, triple-ribbed	*Astragalus tricarinatus*
Milk-vetch, Ventura Marsh	*Astragalus pycnostachyus var. lanosissimus*
Monardella, willowy	*Monardella linoides ssp. viminea*
Morning-glory, Stebbins'	*Calystegia stebbinsii*
Mountain balm, Indian Knob	*Eriodictyon altissimum*
Mountain-mahogany, Catalina Island	*Cercocarpus traskiae*
Mustard, slender-petaled	*Thelypodium stenopetalum*
Navarretia, few-flowered	*Navarretia leucocephala ssp. pauciflora (=N. pauciflora)*
Navarretia, many-flowered	*Navarretia leucocephala ssp. plieantha*
Navarretia, spreading	*Navarretia fossalis*
Niterwort, Amargosa	*Nitrophila mohavensis*
Onion, Munz's	*Allium munzii*
Orcutt grass, California	*Orcuttia californica*
Orcutt grass, hairy	*Orcuttia pilosa*
Orcutt grass, Sacramento	*Orcuttia viscida*
Orcutt grass, San Joaquin	*Orcuttia inaequalis*
Orcutt grass, slender	*Orcuttia tenuis*
Owl's-clover, fleshy	*Castilleja campestris ssp. succulenta*
Oxytheca, cushenbury	*Oxytheca parishii var. goodmaniana*

FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

PLANTS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Paintbrush, ash-grey	*Castilleja cinerea*
Paintbrush, soft-leaved	*Castilleja mollis*
Paintbrush, Tiburon	*Castilleja affinis ssp. neglecta*
Penny-cress, Kneeland Prairie	*Thlaspi californicum*
Pentachaeta, Lyon's	*Pentachaeta lyonii*
Pentachaeta, white-rayed	*Pentachaeta bellidiflora*
Phacelia, island	*Phacelia insularis ssp. insularis*
Phlox, Yreka	*Phlox hirsuta*
Piperia, Yadon's	*Piperia yadonii*
Polygonum, Scotts Valley	*Polygonum hickmanii*
Potentilla, Hickman's	*Potentilla hickmanii*
Pussypaws, Mariposa	*Calyptridium pulchellum*
Rock-cress, Hoffmann's	*Arabis hoffmannii*
Rock-cress, McDonald's	*Arabis macdonaldiana*
Rockcress, Santa Cruz Island	*Sibara filifolia*
Rush-rose, island	*Helianthemum greenei*
Sandwort, Bear Valley	*Arenaria ursina*
Sandwort, Marsh	*Arenaria paludicola*
Seablite, California	*Suaeda californica*
Sedge, white	*Carex albida*
Spineflower, Ben Lomond	*Chorizanthe pungens var. hartwegiana*
Spineflower, Howell's	*Chorizanthe howellii*
Spineflower, Monterey	*Chorizanthe pungens var. pungens*
Spineflower, Orcutt's	*Chorizanthe orcuttiana*
Spineflower, Robust (incl. Scotts Valley)	*Chorizanthe robusta (incl. vars. robusta and hartwegii)*
Spineflower, slender-horned	*Dodecahema leptoceras*
Spineflower, Sonoma	*Chorizanthe valida*
Spurge, Hoover's	*Chamaesyce hooveri*
Stonecrop, Lake County	*Parvisedum leiocarpum*
Sunburst, Hartweg's golden	*Pseudobahia bahiifolia*
Sunburst, San Joaquin adobe	*Pseudobahia peirsonii*
Sunflower, San Mateo woolly	*Eriophyllum latilobum*
Sunshine, Sonoma	*Blennosperma bakeri*
Taraxacum, California	*Taraxacum californicum*
Tarplant, Gaviota	*Deinandra increscens ssp. villosa*
Tarplant, Otay	*Deinandra (=Hemizonia) conjugens*
Tarplant, Santa Cruz	*Holocarpha macradenia*
Thistle, Chorro Creek bog	*Cirsium fontinale var. obispoense*
Thistle, fountain	*Cirsium fontinale var. fontinale*
Thistle, La Graciosa	*Cirsium loncholepis*
Thistle, Loch Lomond coyote	*Eryngium constancei*
Thistle, Suisun	*Cirsium hydrophilum var. hydrophilum*
Thornmint, San Diego	*Acanthomintha ilicifolia*
Thornmint, San Mateo	*Acanthomintha obovata ssp. duttonii*

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FIGURE 6.2 (Cont'd)

ENDANGERED/THREATENED SPECIES LISTING – CALIFORNIA

PLANTS (Cont'd)	
COMMON NAME	**SCIENTIFIC NAME**
Tuctoria, Greene's	*Tuctoria greenei*
Vervain, Red Hills	*Verbena californica*
Wallflower, Ben Lomond	*Erysimum teretifolium*
Wallflower, Contra Costa	*Erysimum capitatum var. angustatum*
Wallflower, Menzies'	*Erysimum menziesii*
Watercress, Gambel's	*Rorippa gambellii*
Wild-buckwheat, southern mountain	*Eriogonum kennedyi var. austromontanum*
Woodland-star, San Clemente Island	*Lithophragma maximum*
Woolly-star, Santa Ana River	*Eriastrum densifolium ssp. sanctorum*
Wooly-threads, San Joaquin	*Monolopia (=Lembertia) congdonii*
Yerba santa, Lompoc	*Eriodictyon capitatum*

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FIGURE 6.3

ENVIRONMENTAL SENSITIVITY MAP

(b) (7)(F)

APPENDIX A

RESPONSE RESOURCES

USCG CLASSIFIED OIL SPILL ORGANIZATIONS (OSROs)

COMPANY OWNED EQUIPMENT

OSRO/CONTRACTOR CONTRACTS

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The Company has identified sufficient response resources, by contract or other approved means to respond to a worst case discharge in each Response Zone identified in this Plan.

The following U.S. Coast Guard listed OSROs have been contracted to respond to spills originating from Company pipelines:

USCG Classified Oil Spill Removal Organization (OSRO) – SECTOR							
OSRO Name	Environment Type	Facility Classification Level				High Volume Port	Contract Responsibility
		MM	W1	W2	W3		
Patriot Environmental Services	Rivers/Canals	X				Yes	This contractor is to provide the properly trained manpower and equipment to perform containment, clean up and proper disposal of spill material per the instructions of the QI.
	Inland	X					

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COMPANY OWNED SPILL RESPONSE EQUIPMENT

Please note the facility does not own response equipment.

Skimmer / Pumps					
Type/Model	**Year**	**Quantity**	**Capacity (Gal/Min)**	**Daily Effective Recovery Rate**	**Date Last Fuel Changed**
		NONE			
Notes:					

Boom			
Type/Model	**Year**	**Quantity**	**Size/Containment Area**
	NONE		
Notes:			

Chemicals and Dispersant Equipment			
Amount	**Date Purchased**	**Treatment Capacity**	**Storage Location**
	NONE		
Notes:			

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COMPANY OWNED SPILL RESPONSE EQUIPMENT (Cont'd)

Sorbents			
Type/Model/Year	**Quantity**	**Size**	**Absorbent Capacity**
	NONE		
Notes:			

Communication Equipment		
Type/Model	**Year**	**Quantity**
	NONE	

Fire Fighting Equipment and Protective Equipment	
Type	**Quantity (Approx.)**
NONE	

Other (Heavy Equipment, Boats, etc.)		
Type/Model	**Quantity**	**Storage Location**
	NONE	
Notes:		

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COMMUNICATIONS EQUIPMENT

The following communication systems are used for daily operations as well as emergency response operations:

- Cellular phones - all field personnel have cellular phones.
- Landline phones - the manned facilities have landline phones.

As the need arises, additional communications equipment can be procured from contractors.

PATRIOT ENVIRONMENTAL SERVICES

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Office of Spill Prevention and Response
1700 K Street, Ste 250
Sacramento, CA 95811
http://www.dfg.ca.gov
916-445-9338

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

RECEIVED
JAN 16 2012

January 5, 2012

Mr. Dale Strieter
Technical Services Manager
Patriot Environmental Services
508 East E Street
Wilmington, California 90744

Dear Mr. Strieter:

SUBJECT: OSRO RATING LETTER

This letter is in response to your Oil Spill Response Organization (OSRO) application received on November 7, 2011. Pursuant to Title 14, California Code of Regulations, section 819, Patriot Environmental Services is rated to deploy the amounts and capacities of equipment in the time frames indicated on the enclosed OSRO Rating Response Matrix. Unless this rating is modified, suspended, or revoked, this rating letter shall remain valid until December 12, 2014 (14, CCR 819.06).

OSRO Ratings are based on the application, verification of actual services provided, equipment and resources available, and established subcontracts and agreements. You are required to notify the Administrator of any significant reductions in equipment or personnel levels in advance, if planned, or within 24 hours of becoming aware of such changes.

If you have any questions, you may contact Mr. Jeff Poteet, at telephone number (916) 323-6285 or by e-mail at jpoteet@ospr.dfg.ca.gov.

Sincerely,

Scott D. Schaefer
Administrator (Acting)

OSRO RATING RESPONSE MATRIX	NAME: Patriot Environmental Services					Expires: December 12, 2014				
Hours	**0**	**1**	**2**	**4**	**6**	**12**	**18**	**24**	**36**	**60**
ACP 2 / GRA 8 North Delta - Sacramento to Sherman Island	No rating for ACP 2									
Containment Boom (Feet)										
Recovery (Bbls)										
Storage (Bbls)										
Shoreline Protection:										
ACP 2 / GRA 9 South Delta - Old & Middle R. to Tracy	No rating for ACP 2									
Containment Boom (Feet)										
Recovery (Bbls)										
Storage (Bbls)										
Shoreline Protection:										
ACP 2 / GRA 10 East Delta - Stockton & San Joaquin R.	No rating for ACP 2									
Containment Boom (Feet)										
Recovery (Bbls)										
Storage (Bbls)										
Shoreline Protection:										
ACP 3 Central Coast										
Containment Boom (Feet)						8,000				
Recovery (Bbls)						1,372				
Storage (Bbls)						3,740				
Shoreline Protection:										
ACP 4 LA/LB North - Coastal										
Containment Boom (Feet)	600*				2,000		9,200			
Recovery (Bbls)					23,437					
Storage (Bbls)					5,000					
Shoreline Protection: **										

OSRO RATING RESPONSE MATRIX	**NAME: Patriot Environmental Services**					**Expires: December 12, 2014**				
Hours	**0**	**1**	**2**	**4**	**6**	**12**	**18**	**24**	**36**	**60**
ACP 4 Pt. Hueneme & Santa Barbara Channel										
Containment Boom (Feet)	600*		2,000		2,000					
Recovery (Bbls)			3,125		23,437					
Storage (Bbls)			425		5,000					
Shoreline Protection: **										
ACP 5 LA/LB South - Coastal										
Containment Boom (Feet)	600*		2,000	2,000	4,000					
Recovery (Bbls)			3,125	13,280	23,437	23,437	27,343	31,250	46,875	78,125
Storage (Bbls)			260	520	12,000					
Shoreline Protection: **										
ACP 5 LA/LB South - Harbor										
Containment Boom (Feet)	600*		2,000	2,000	4,000					
Recovery (Bbls)			3,125	13,280	23,437	23,437	27,343	31,250	46,875	78,125
Storage (Bbls)			260	520	12,000					
Shoreline Protection: **										
ACP 6 Coastal	OPRA (Queens Gate)									
Containment Boom (Feet)	600*		2,000	2,000	4,000					
Recovery (Bbls)			3,125	13,280	23,437	23,437	27,343	31,250	46,875	78,125
Storage (Bbls)			260	520	12,000					
Shoreline Protection: **										
ACP 6 San Diego Bay										
Containment Boom (Feet)	600*		2,000	2,000	4,000					
Recovery (Bbls)			3,125	13,280	23,437	23,437	27,343	31,250	46,875	78,125
Storage (Bbls)			260	520	12,000					
Shoreline Protection: **										

* 24 hr advanced noticed required

** 24 hr advanced notice required for all time frames

PATRIOT ENVIRONMENTAL SERVICES
OSRO SPILL COVERAGE & JOINT TRAINING OPERATIONS

Date: 07/01/2013 Patriot Representative: Glenn McCarthy

Customer: LINN Energy Authorized Representative: Vince VanDelden

Address of Service Site: 2000 Tonner Canyon Road, Brea, CA 92821

Billing Address: 2000 Tonner Canyon Road, Brea, CA 92821

Phone: 714-257-1604 Fax: 714-257-1615 Other: 714-356-4638

Email Address: vvandelden@linnenergy.com

Services Requested: (Note: Patriot's services are limited to those directed by the Client, or those which are ordinarily and regularly considered required to complete the requested Services. All Services are provided in accordance with Federal, State and local statute and regulations, and as directed by the client and/or established unified command. Client, unless expressly stated otherwise, is responsible for obtaining all required permits and authorizations, and for providing all necessary access and permissions to access the Site.)

OSRO SPILL COVERAGE & JOINT TRAINING OPERATIONS

OSPR & NON OSPR JURISDICTIONAL FACILITIES

PROVIDE ALL TRAINED PERSONNEL, LABOR, TOOLS & EQUIPMENT NECESSARY TO PROVIDE OSRO SERVICES TO MEET APPLICABLE STATE OF CALIFORNIA AND THE FEDERAL OPA '90 REQUIREMENTS FOR CONTRACTED OIL SPILL REMOVAL SERVICES

TERM OF AGREEMENT IS THREE YEARS FROM AGREEMENT DATE WITH 2 ONE YEAR RENEWALS AT THE EXISTING RATE

AGREEMENT WILL RENEW AUTOMATICALLY UNLESS TERMINATED IN WRITING 90 DAYS PRIOR TO RENEWAL DATE.

TERMS AND CONDITIONS

1. General. This Agreement is subject to the Patriot Terms and Conditions Statement, and the Patriot Fee Schedule, which together constitute the entire Agreement relating to the Services. Signature of the Client's authorized representative below constitutes acknowledgement that all documents have been read and are understood, and constitutes acceptance of the Agreement in its entirety.

2. Compensation and Payment. Compensation for the Services shall be in accordance with the attached Patriot Fee Schedule. Cost information provided by Patriot are estimates only and are not binding on Patriot. **Payment for Services is required to be in accordance with the Terms and Conditions Statement and acceptance of this payment schedule is a material condition of this Agreement, and any delay or threatened delay in payment will allow Patriot to suspend or terminate operations immediately.** Initialing by the Client/Agent here VW constitutes Agreement that this provision is fully understood by Client/Agent, and that Client/Agent accepts responsibility for payment according to the schedule provided in the Terms and Conditions Statement.

3. Limited Power of Attorney. Initialing by the Client/Agent here VW constitutes appointment of Patriot as its attorney-in-fact to execute on behalf of Client all profile, waste manifests and other documents required for the proper transportation and disposal of waste and hazardous material resulting from or recovered by Patriot during the performance of Services. This appointment may be relied upon until withdrawn in writing.

Signatures below constitute acceptance of all of the terms of this Agreement as described above, in the Patriot Fee Schedule and the Terms and Conditions Statement. This constitutes the total agreement between the parties and replaces any and all prior agreements, whether written or oral.

Patriot Environmental Services		Authorized Representative	
Print:	Glenn McCarthy	Print:	Kingman Delden
Signature:	Digitally signed by GLENN MCCARTHY DN: cn=GLENN MCCARTHY, o=PATRIOT, ou, email=gmccarthy@patriotenvironmental.com, c=US Date: 2013.07.01 14:56:12 -07'00'	Signature:	
Title:	Logistics & Project Management	Title:	EH&S Rep.
Date:	07/01/2013	Date:	7/1/13

Patriot Environmental Services

ATTACHMENT
TERMS AND CONDITIONS STATEMENT

1. SCOPE AND LIMITATION OF WORK

Timeliness. Patriot shall use reasonable efforts to adhere to the agreed-upon schedule to complete the Services. No warranties or representations are made as to the completion date of any Services undertaken; Client will have no right to damages arising due to Patriot's delay in the completion of the Services.

Changes and Suspensions. Regardless of the prices agreed upon to perform the Services as described in the Agreement, Patriot will be compensated in accordance with the Patriot Fee schedule then in effect for any changes requested by Client in the Services at any time. Client further agrees to pay the entire amount due for the Services provided in accordance with this Agreement, regardless of any determination by an insurance carrier of the value of the services provided. Conditions differing from information provided by Client, those differing from what is revealed by a visual site inspection, changes in laws or required standards or directives of federal or state agencies, as well as other unknown or unanticipated conditions, shall be considered a change requested by Client. Patriot shall be entitled to compensation at the rates contained in the then-current Patriot Fee schedule for personnel and equipment required to stand by during any period of suspension of Services due to reasons beyond the direct control of Patriot, for demobilization and mobilization costs required to remove personnel and equipment to and from the site, and for other direct costs incurred as a result of such suspension.

Performance of Services. Services shall be performed by employees of Patriot, or by Subcontractors who will be controlled and under the sole authority of Patriot, and who will be compensated for performance of the Services directly by Patriot under the terms and conditions of their agreements with Patriot. Patriot will be responsible for the qualification of any subcontractors used to perform Services on behalf of Client. Client will be billed for services provided by Patriot's Subcontractors at the greater of the rates listed in the Patriot Fee Schedule for services, or the cost of the Subcontractors' services plus an administrative charge of twenty percent (20%) of the cost of these services. Subcontractors' services will be identified on the Patriot Daily Work Report. Client agrees not to contact Patriot's subcontractors, directly or indirectly (including through agents), to attempt to secure the Subcontractors services for work to complete the Services, except through Patriot, or to seek to induce the Subcontractors to violate the terms of their agreements with Patriot.

Transportation, Storage and Disposal of Waste and Hazardous Materials. Upon Client's request, Patriot will assist with the storage or disposal of any waste or substance regulated by law, and will transport such waste or cause it to be transported under a waste manifest executed by Client or its agent to a disposal or treatment facility selected by Client. Patriot's interest in any such transportation undertaken or arranged by Patriot to any disposal facility, and any execution of contracts, waste profiles, or payments by Patriot for any transportation or disposal services shall be limited solely to its action as
Client's agent. Client shall remain responsible for any claims by the disposal facility with respect to the waste and shall look solely to the disposal facility in the event of a release or other liability arising from the disposal service.

Ownership of Waste and Hazardous Materials. Patriot does not (i) accept title to any waste or hazardous materials handled by Patriot on behalf of the Client; or (ii) acquire the status of the generator, owner, operator or arranger of treatment, storage or disposal, as defined by federal and state laws governing the handling, treatment, storage or disposal of solid or hazardous waste. Client warrants that it has title to and is the generator of any hazardous waste or substance handled by Patriot during the performance of Services.

Suspension or Termination by Patriot. Patriot may suspend or terminate this Agreement at any time, and discontinue providing the Services, in the event of (i) failure of Client to timely pay amounts due, or (ii) breach by Client of any provision of this Agreement. Client shall be responsible for all charges incurred as a result of such termination or suspension, in addition to charges for Services performed hereunder.

2. PAYMENT FOR SERVICES

Patriot will be paid for Services in accordance with this Agreement, regardless of any other Client Payment or Accounts Payable policy or procedure of Client. The invoiced amounts must be paid within fifteen (15) days after the presentation of each invoice submitted by Patriot. Service charges of 1.5% per month, or the maximum rate permitted by law, whichever is less, shall accrue from the due date until paid. In addition to interest, Client shall also be responsible for all costs incurred by Patriot to collect overdue amounts, including collection fees, filing fees, court costs and attorney's fees. Client must not, in any manner, make itself or its agents unavailable for receipt of invoices in an attempt to delay payment as required under this Section. Patriot reserves all legal rights and recourses against the Client and its property for failure of Client to pay such invoices when due.

3. ADDITIONAL WARRANTIES AND LIMITATION OF LIABILITY

Warranties. Patriot makes no warranty that Patriot will recover any specific quantity of hazardous or other substance, or that any specific level of cleanliness will be achieved or human activity can be resumed. Patriot shall perform the Services with that skill and workmanship, and use the standard of care, exercised by similar firms performing similar services. Upon written notice of a defect or failure to provide Services, Patriot will re-perform deficient Services, so long as such notice is received by Patriot prior to acceptance and demobilization of Patriot personnel & equipment. Re-performance of deficient Services by Patriot shall constitute Patriot's sole liability with respect thereto and is made in lieu of all warranties, express, implied or statutory including the warranties of merchantability, fitness for a particular purpose, custom and usage or otherwise, which are hereby disclaimed by Patriot and waived by Client. Except as otherwise provided in this section, Patriot's liability to Client for any reason in connection with the performance of the Services shall terminate upon acceptance of the Services by Client.

Express Limitation of Liability. Notwithstanding any provision contained in this Agreement, neither party shall be liable to the other party for any indirect, special or consequential damages of any kind, including without limitation, loss of profits or loss of use, regardless of the cause, including negligence. PATRIOT'S AGGREGATE LIABILITY UNDER THIS AGREEMENT, OR ARISING FROM THE PERFORMANCE OF THE SERVICES, HOWEVER CAUSED, INCLUDING NEGLIGENCE, SHALL NOT EXCEED 200% OF PATRIOT'S COMPENSATION FOR THE SERVICES. CLIENT SHALL RELEASE AND INDEMNIFY PATRIOT AGAINST ANY LIABILITY IN EXCESS OF THIS AMOUNT TO THE FULLEST EXTENT ALLOWABLE BY LAW.

Insurance. During the performance of the Services, Patriot shall maintain worker's compensation and employer's liability insurance, and commercial general liability insurance in the amount of $1,000,000 per occurrence/$2,000,000 aggregate; automobile liability insurance in the amount of $1,000,000 combined single limit and Contractor's Pollution Liability in the amount of $1,000,000 per occurrence. Upon request, Client can be named an additional insured on the general and automobile liability policies but only to the extent the occurrence is caused by the negligent operations of Patriot. Patriot's insurance shall not extend to cover the fault or negligence of Client or any third party.

Indemnification by Client. Client shall indemnify, defend and hold Patriot harmless from and against any and all loss, liability, claims, damages, fines, penalties costs or expenses (including court costs and attorney's fees) incurred by Client, Patriot or third parties arising from or in connection with any bodily injury or death, property damage, environmental release, impairment, pollution or condition or any other cause occurring prior to Patriot's commencement of the Services, and during or after the performance of the Services except to the limited extent directly attributable to Patriot's negligent performance of the Services described in this Agreement. Client shall provide reasonable notice of any such loss or liability in order to allow Patriot reasonable opportunity to join in the defense.

4. MISCELLANEOUS PROVISIONS

Totality of the Agreement. The Master Service Agreement, the Patriot Fee schedule and this Attachment (collectively "the Agreement") constitute the entire agreement between Patriot Environmental Services, Inc. and the Client named on the Work Order. Any provisions contained in any purchase order, specification or other document provided by Client that vary or conflict with the terms contained herein are hereby rejected unless expressly incorporated and signed by both parties.

Form and Agreement by Counterparts. The parties agree that any facsimile copy of this Work Order, attachments and all signatures and initials appearing hereon are valid and binding on the parties and that this Agreement may be signed in multiple counterparts.

Waiver. No failure of Patriot to take any action or assert any right shall be deemed a waiver of that right in the event of the continuation or repetition of the circumstances giving rise to such right.

Governing Law. This Agreement, and all transactions contemplated hereby, shall be governed by, construed and enforced in accordance with the laws of the State of California, and to the extent applicable, the General Maritime Law of the United States and applicable international treaties and conventions. The parties herein waive trial by jury and agree to submit to the personal jurisdiction and venue of a court of subject matter jurisdiction located in Los Angeles County, State of California. In the event that litigation results from or arises out of this Agreement or the performance thereof, the parties agree to reimburse the prevailing party's reasonable attorney's fees, court costs, and all other expenses, whether or not taxable by the court as costs, in addition to any other relief to which the prevailing party may be entitled. In such event, no action shall be entertained by said court or any court of competent jurisdiction if filed more than one year subsequent to the date the cause(s) of action actually accrued, regardless or whether damages were otherwise as of said time calculable.

APPENDIX B

WORST CASE DISCHARGE ANALYSIS AND SCENARIO

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 (Bbls) 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 Appendix A. Pipeline response personnel list/telephone numbers and other internal/external resources telephone numbers are detailed in Figures 2.2 and 2.5.

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RESPONSE CAPABILITY SCENARIOS

PIPELINE WORST CASE DISCHARGE AT BREA RESPONSE ZONE

RESPONSE ZONE = (b) (7)(F)

The worst case discharge in this Pipeline is (b) (7)(F)

Description

The pipeline originates at Linn Tonner Tank Farm in Orange County, CA and transfers crude oil to the Sterns Crude Oil Shipping Junction and Columbia Tank Farm in Orange County, CA. Line sizes vary from 4.5 inches to 8 inches.

The type of material that could be discharged is crude oil.

Volume

This WCD scenario involves a line segment using the pipeline's maximum release time in hours, plus the maximum shutdown response time in hours, multiplied by the maximum flow rate expressed in barrels per hour (bph), plus the largest line drainage volume after shutdown of the line section. The worst case discharge is for this pipeline involves the 1.7 mile, 8 inch diameter Tonner Shipping (b) (7)(F) .

(b) (7)(F)

breakout tanks.

Note: Adverse weather will not affect detection or shut down times.

RESPONSE CAPABILITY SCENARIOS (Cont'd)

PIPELINE WORST CASE DISCHARGE AT BREA RESPONSE ZONE

RESPONSE ZONE = (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 tier requirements for non-high volume areas (Tier 1 = 12 hours; Tier 2 = 36 hours; Tier 3 = 60 hours).
- Resources capable of oil recovery in inclement weather conditions (i.e. heavy rain).

Notes:

- Contracted equipment and manpower resources are detailed in Figure 2.6 (USCG Classified OSRO) and Appendix A.
- Telephone references are provided in Figures 2.2 and 2.5.

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RESPONSE CAPABILITY SCENARIOS (Cont'd)

BREAKOUT TANKS AT BREA RESPONSE ZONE

There are no breakout tanks at this Facility.

Spill Prevention Measures	Percent Reduction Allowed
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30.	50%
Tank built, rebuilt, and repaired according to API Std 620/650/653.	10%
Automatic high-level alarms/shutdowns Designed according to NFPA/API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653.	5%
Maximum allowable credit or reduction	70%

APPENDIX C

EMERGENCY PREPLANNING

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EMERGENCY PREPLANNING

C.1 PIPELINE LEAK DETECTION SYSTEMS

The Linn Western Operating, Inc. Control Center monitors pressure, flow, and barrel counts for the pipeline. If unexpected deviations are noted within any of these parameters, alarms notify the controller of the deviation and require him to take necessary action.

C.2 PIPELINE LEAK INSPECTION SYSTEMS

Visual observations are conducted daily. Aerial inspections conducted by a right of way patrol pilot are conducted on a regular basis.

Based on sound engineering judgment the pipeline is replaced or repaired as necessary.

C.2.A Visual Inspection

The pipeline and adjacent areas are visually inspected for leaking oil 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 are conducted periodically.

C.2.B Cathodic Protection

All pipelines are coated and have cathodic protection. These pipelines are subject to periodic cathodic protection inspections.

C.2.C 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.

C.2.D Valve Maintenance

All valves are inspected annually to ensure proper working condition.

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APPENDIX D

TRAINING AND DRILLS

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D.1 RESPONSE TEAM TRAINING

The Oil Spill Removal Organization through contract to the Company provides trained personnel to respond to pipeline discharges. The company contracts separately qualified personnel related to repair pipeline ruptures after the response is complete.

All personnel & contract 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.

All reporting personnel know:

- The content of the information summary of the Response Plan.
- The toll-free telephone number of the National Response Center.
- The notification process.

All response personnel know:

- The characteristics and hazards of the oil discharged.
- The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions, and the appropriate corrective actions.
- The steps necessary to control and accidental discharge of oil and to minimize the potential for fire, explosion, toxicity or environmental damage.
- Proper use of personal protective equipment and fire-fighting procedures commensurate with their job description and level of training.

Training records for each individual trained are maintained at headquarters.

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

Facility Response Plan Review

- All 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.

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, Company employees will receive "First Responder Awareness Level" training. All "Non-Company" personnel responding to an incident must satisfy the applicable HAZWOPER training requirements of 29 CFR 1910.120.

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D.1 RESPONSE TEAM TRAINING (Cont'd)

HAZWOPER (29 CFR 1910.120) (Cont'd)

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

- Contract personnel will receive ICS training and may also receive supplemental training in other, related general topics.

Volunteers

- The Company will not use volunteers for emergency incident response and no Company provisions exist to train them. Volunteers may be used by government response entities, as allowed by applicable policies/procedures.

Training Records Maintenance

- Contract personnel emergency response training records are maintained at Corporate Headquarters. Training records for response personnel will be maintained for as long as personnel have duties in this response plan.

Contractor Training

- The Company also recognizes that contract personnel must also have sufficient training to response to 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.

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D.1 RESPONSE TEAM TRAINING (Cont'd)

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. Company personnel with responsibility to coordinate the training program also conduct periodic informal audits of training courses selected for the Company's training program to ensure their suitability for the program.

D.2 RESPONSE TEAM EXERCISES

Contract operators, government agencies, 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 will conduct announced and unannounced drills to maintain compliance, and each plan-holder must conduct at least one exercise annually. The Company Management will be responsible for the planning, carrying out and monitoring of the drill exercises. 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 (Unannounced)
3	Annual	Equipment Deployment Exercise *(Consists entirely of OSRO equipment).*
3	Annual	Spill Management Team Tabletop Exercise
3	Not more than Tri-annually	Unannounced Exercise *(not a separate exercise)* Actual response can be considered as an unannounced exercise.
NOTE: All response plan components must be exercised at least once in the Cycle.		

Records of equipment deployment exercises shall be maintained on file at the Facility and Company Headquarters for a period of at least five (5) years.

Quarterly QI Notification Exercise

- **Scope:** Exercise communication between facility personnel and the QI(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours.

- **Objective:** Contact must be made with a QI or designated alternate, as identified in the Plan.

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D.2 RESPONSE TEAM EXERCISES (Cont'd)

- **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.

Emergency Procedure Exercise (optional)

- **Scope:** Exercise the emergency procedures for the facility to mitigate or prevent any discharge or substantial threat of a discharge of oil or hazardous material from facility operational activities associated with oil transfers.

- **Objective:** Conduct an exercise of the facility's emergency procedures to ensure personnel knowledge of the actions to be taken to mitigate a spill. This exercise may be a walk-through of the emergency procedures.

- **Optional:** This is offered as an optional exercise to provide facilities with an exercise that may be conducted unannounced to fulfill the internal unannounced exercise requirement.

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

- **Scope:** Deploy and operate facility response equipment identified in the response plan. The equipment to be deployed must include the following, at a minimum:

  - 1,000 feet of representative type of boom;
  - one of each type of skimming system; or
  - the equipment necessary to respond to the facility's Small/Average Most Probable Discharge (AMPD), whichever is less.

- **Objective:** Demonstrate personnel's ability to deploy and operate response equipment. Ensure that the response equipment is in proper working order.

- **General:** The Facility may take credit for actual equipment deployment to a spill, or for training sessions, as long as the activities are properly documented.

Annual Equipment Deployment Exercise (OSRO-owned equipment)

- **Review:** The Facility should verify that the OSRO(s) has completed the equipment deployment exercise requirements and has maintained the necessary documentation. The OSRO may deploy equipment at any location, so long as it occurs within an operating environment similar to the Facility's.

- **Scope:** USCG certified OSRO's must ensure and document that an exercise or response has been conducted in each response area in which they are certified. Non-certified OSRO's must deploy and operate response equipment identified in this response plan. The equipment to be deployed must include the following, at a minimum:

  - 1,000 feet of each type of boom listed in the plan.
  - One of each type of skimming system listed in the plan.

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D.2 RESPONSE TEAM EXERCISES (Cont'd)

- **Objective:** OSRO must demonstrate the ability of the personnel (OSRO) to deploy and operate response equipment (OSRO). Ensure that the response equipment (OSRO) is in proper working order.

Annual Response Team Tabletop Exercise

- **Scope:** Exercise the response team's organization, communication, and decision-making in managing a spill response. Each team identified within the plan must conduct an annual Response Team Tabletop Exercise.

- **Objective:** Exercise the response team in a review of the following:

  - Knowledge of the Plan.
  - Proper notifications.
  - Communications system.
  - Ability to access an OSRO.
  - Coordination of internal spill response personnel.
  - Review of the transition from a local team to a regional team.
  - Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
  - Ability to access information in the Area Contingency Plan.

- **General:** A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst-Case Discharge scenario.

Unannounced Exercise

- An unannounced exercise is not a separate exercise. Any of the previously described exercises may be used as an unannounced exercise, except for the Quarterly QI Notification and annual OSRO-owned Equipment Deployment. An unannounced exercise is where the exercise participants do not have prior knowledge of the exercise, as would be the situation in an actual spill incident.

Government-Initiated Unannounced Exercise

- **Scope:** The Facility is required to participate in only one unannounced exercise every 36 months from the date of the last government-initiated unannounced exercise.

  - Exercises are limited to approximately four hours in duration.
  - Exercises would involve response to a Small/Average Most Probable Discharge scenario.
  - Exercise would involve equipment deployment to respond to a spill scenario.

- **Objective:** Conduct proper notifications to respond to unannounced scenario of a Small/Average Most Provable Discharge.

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

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D.2 RESPONSE TEAM EXERCISES (Cont'd)

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

Exercise Documentation

- All exercises should be documented and maintained at the facility; documentation should specify:

  - The type of exercise;
  - Date and time of the exercise;
  - A description of the exercise;
  - The objectives met in the exercise;
  - The components of the response plan exercised; and
  - Lessons learned.

- Exercise documentation should be kept on file for the required length of time depending on the regulating agency (three (3) years for the U.S. Coast Guard and/or DOT/PHMSA and 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.

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D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Detection

- Was the spill detected promptly?
- How was it detected? By whom?
- Could it have been detected earlier? How?
- Are any instruments or procedures available to consider which might aid in spill detection?

Notification

- Were proper procedures followed in notifying government agencies? Were notifications prompt?
- Was management notified promptly/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 resources are available and have they been identified and used adequately?

Response – Strategy

- Is there an adequate Spill Response Plan for the location?
- Is it flexible enough to cope with unexpected spill events?
- Does the Plan include clear understanding of local environmental sensitivities?
- What was the initial strategy for response to this spill?

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D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Response – Strategy (Cont'd)

- Is this strategy defined in the Spill Plan?
- How did the strategy evolve and change during this spill and how were these changes implemented?
- What caused such changes?
- Are there improvements needed? More training?

Response - Resources Used

- What resources were mobilized?
- How were they mobilized?
- How did resource utilization change with time? Why?
- Were resources used effectively?
    - Contractors
    - Government agencies
    - Company resources
    - Cooperatives
    - Volunteers
    - Consultants
    - Other (e.g., bird rescue centers)
- What changes would have been useful?
- Do we have adequate knowledge of resource availability?
- Do we have adequate knowledge of waste disposal capabilities?

Response – Effectiveness

- Was containment effective and prompt?
- How could it have been improved?
- Should the location or the local cooperative have additional resources for containment?
- Was recovery effective and prompt?
- How could it have been improved?
- Should the location or the local cooperative have additional resources for recovery of spilled product?
- Was contaminated equipment disposed 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?

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D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Command Structure (Cont'd)

- What improvements are needed? Hardware, procedures, etc.
- Was support from financial services adequate? Prompt?
- Should there be any changes?
- Is more planning needed?
- Should financial procedures be developed to handle such incidents?

Measurement

- Was there adequate measurement or estimation of the volume of product spilled?
- Was there adequate measurement or estimation of the volume of product recovered?
- Was there adequate measurement or estimation of the volume of product disposed?
- Should better measurement procedures be developed for either phase of operations?
- If so, what would be appropriate and acceptable?

Government Relations

- What are the roles and effects of the various government agencies which were involved?
- Was there a single focal point among the government agencies for contact?
- Should there have been better focus of communications to the agencies?
- Were government agencies adequately informed at all stages?
- Were too many agencies involved?
- Are any changes needed in procedures to manage government relations?
- Examples of affected U.S. agencies (there may be others):
    - U.S. Coast Guard
    - Environmental Protection Agency
    - National Oceanic and 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?

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D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Public Relations (Cont'd)

- 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.

D.4 INCIDENT COMMAND SYSTEM

The Incident Command System is intended to be used as a 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 (ICS) utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies
- Is simple and familiar, and is used routinely at all incidents
- Allows structured communication
- Is a structured system for response and assignment of resources
- Provides for expansion, escalation, and transfer/transition of roles and responsibilities
- Allows for "Unified Command" where outside agency involvement at the command level is required

Effective establishment and utilization of the ICS during response to all types of emergencies can:

- Provide for increased safety
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, state, and federal emergency response personnel
- Provide a solid cornerstone for emergency planning efforts

Section D.6 provides a comprehensive list of every response team member's duty assignment.

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D.5 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 Unified Command (UC) system 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 UC 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 the Unified Command of the Incident Command System. These jurisdictions could be represented by any combination of:

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

The participants of the UC for a specific incident will be determined by 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 appropriation and release of 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
- 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

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D.6 DISCHARGE CLASSIFICATION

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

TIER I EVENT
Incident Command will normally be assumed by Facility Management. Regional and Head 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.

TIER II EVENT
Local Company resources may have to be supplemented with Head 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.

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D.6 DISCHARGE CLASSIFICATION (Cont'd)

TIER III EVENT
Maximum Company and external resources must be implemented to respond to the spill incident. Activation of the Crisis Management Team would be anticipated during a Tier 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.

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APPENDIX E

DISPOSAL PLAN

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OVERVIEW

A major oil spill response would generate significant quantities of waste materials ranging from oily debris and sorbent materials to sanitation water and used batteries. All these wastes need to be classified and separated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed of at approved disposal sites. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by federal and state laws and regulations. This section provides an overview of the applicable state regulations governing waste disposal, and a discussion of various waste classification, handling, transfer, storage, and disposal techniques. It is the responsibility of the Company's Designated Disposal Specialist to manage waste disposal needs during an oil spill cleanup.

WASTE CLASSIFICATION

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).

Oily - Solid/Semi-Solid Wastes

Oily solid/semi-solid wastes that would be generated by containment and recovery operations include damaged or worn-out booms, disposable/soiled equipment, used sorbent materials, saturated soils, contaminated beach sediments, driftwood, and other debris.

Non-Oily - Solid/Semi-Solid Wastes

Non-oily solid/semi-solid wastes would be generated by emergency construction operations (e.g., scrap, wood, pipe, and wiring) and office and field operations (i.e., refuse). Vessel, vehicle, and aircraft operations also produce solid wastes.

WASTE HANDLING

A primary concern in the handling of recovered oil and oily debris is contaminating unaffected areas or recontaminating already cleaned areas. Oily wastes generated during the response operations would need to be separated by type and transferred to temporary storage areas and/or transported to an off-site, permitted treatment, storage and disposal facilities. Proper handling of oil and oily wastes is imperative to ensure personnel health and safety and compliance with environmental regulations.

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WASTE HANDLING (Cont'd)

Safety Considerations

Care should be taken to avoid or minimize direct contact with oily wastes. All personnel handling or coming into contact with oily wastes will 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 are to 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 will 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.
- Directly into the storage tank of a vacuum device.
- From a skimming vessel or flexible bladder.
- From a vacuum device storage tank.
- 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.

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WASTE HANDLING (Cont'd)

Waste Transfer (Cont'd)

- **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 E-1 provides a comparative evaluation of 16 types of transfer systems that could be available for transfer operations.

WASTE STORAGE

Interim storage of recovered oil, oily and non-oily waste should be considered to be an available means of holding the wastes until a final management method is selected. In addition, the segregation of wastes according to type would facilitate the appropriate method of disposal. The storage method used would depend upon:

- The type and volume of material to be stored.
- The duration of storage.
- Access.

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively depends upon the available storage capacity. Typical short-term storage options are summarized in Table E-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 are acceptable, if the available space can support the weight of both the container and the product.

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 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 type.
- Flooding.
- Surface water.
- Slope.
- Type of material.
- Capacity of site.
- Climatic factors.
- Land use.
- Toxic air emissions.
- Security of site.
- Access to site.
- Public accessibility.

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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 should be removed and disposed of with the rest of the oily debris. Any surrounding soil which has become contaminated with oil should also be removed for disposal or treatment. Treatment and remediation is encouraged when feasible. The temporary storage should be returned to its original condition.

WASTE DISPOSAL

Techniques for Disposal of Recovered Oil

During an oil spill incident, the Company representative will consult with the federal and state On Scene Coordinators (OSCs) 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 will be prepared by a Designated Disposal Specialist of the Company's Response Team in the form of an Incident Disposal Plan which must then be authorized by the U.S. Coast Guard and/or the EPA. An Incident Disposal Plan should 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.

In order to obtain the best overall Incident Disposal Plan, a combination of methods should be used. There is no template or combination of methods that can be used in every spill situation. Each incident should be reviewed carefully to ensure an appropriate combination of disposal methods are employed.

The different types of wastes generated during response operations will require different disposal methods. To facilitate the disposal of wastes, they should be separated by type for temporary storage, transport and disposal. Table E-3 lists some of the options that are available to segregate oily wastes. The table also depicts methods that can 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.

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WASTE DISPOSAL (Cont'd)

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 a Company internally approved disposal site.

Incineration

This technique entails the complete destruction of the recovered oil by high temperature incineration. 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 include:

- Proximity to recovery locations.
- Access to recovery locations.
- Adequate fire control.
- Approval of the local air pollution control authorities.

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 should 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 are to be disposed of only at Company-approved disposal facilities. The Company's Designated 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 Company's Designated Disposal Specialist prior to sending any waste to such a facility.

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TABLE E-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.

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TABLE E-2

TEMPORARY STORAGE METHODS

CONTAINER	ONSHORE	SOLIDS	LIQUIDS	NOTES
Barrels	x	x	x	May require handling devices. Covered and clearly marked.
Tank Trucks	x		x	Consider road access.
Dump/Flat Bed Trucks	x	x		May require impermeable liner and cover. Consider flammability of vapors at mufflers.
Oil Storage Tanks	x		x	Consider problems of large volumes of water in oil.
Bladders	x		x	May require special hoses or pumps for oil transfer.

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TABLE E-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 F

MISCELLANEOUS FORMS

Forms and Exercise Documentation File Maintenance Procedures

- Forms and exercise documentation records should be maintained in a separate file in the Pipeline owner/operator office filing system.
- These files must be available for presentation upon request by regulatory agency personnel.

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NOTIFICATION DATA SHEET

Date of Incident: _____ *Time of Incident:* _____

INCIDENT DESCRIPTION

Reporter's Full Name: _____ *Position:* _____
Day Phone Number: _____ *Evening Phone Number:* _____
Company: _____ *Organization Type:* _____

Facility Address: _____ *Owner's Address:* _____

Facility Latitude: _____ *Facility Longitude:* _____
Incident Address/Location: _____
(if not at Facility): _____
On-Scene Weather Conditions: _____
Responsible Party's Name: _____ *Phone Number:* _____
Responsible Party's Address: _____
Source and/or cause of incident: _____

Nearest City: _____
County/Parish: _____ *State:* _____ *Zip code:* _____
Section: _____ *Township:* _____ *Range:* _____ *Borough:* _____
Distance from City: _____ *Unit of Measure:* _____ *Direction from City:* _____
Container Type: _____ *Container Storage Capacity:* _____ *Unit of Measure:* _____
Facility Oil Storage Capacity: _____ *Unit of Measure:* _____
Were Materials Discharged? _____ *(Y/N) Confidential?* _____ *(Y/N)*

CHRIS Code	Total Quantity Released	Unit of Measure	Water Impact (*YES or NO*)	Quantity into Water	Unit of Measure

RESPONSE ACTION(S)

Action(s) taken to Correct, Control, or Mitigate Incident: _____

Number of Injuries: _____ *Number of Deaths:* _____
Evacuation(s): _____ *(Y/N) Number Evacuated:* _____
Was there any damage? _____ *(Y/N) Medium Affected:* _____
Description: _____
More Information about Medium: _____

CALLER NOTIFICATIONS

National Response Center (NRC): 1-800-424-8802
Additional Notifications (Circle all applicable): *USCG* *EPA* *State* *Other*
Describe: _____
NRC Incident Assigned No: _____

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in this report: _____

Meeting Federal Obligations to Report? _____ *(Y/N) Date Called:* _____
Calling for Responsible Party? _____ *(Y/N) Time Called:* _____

NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.

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FORM PHMSA F 7000-1

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed $100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.

OMB NO: 2137-0047

EXPIRATION DATE: 1/31/2014

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

ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date _____

No. _____
(DOT Use Only)

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0047. Public reporting for this collection of information is estimated to be approximately 10 hours per response (5 hours for a small release), including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

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 PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline/library/forms. Note: Certain low consequence accidents only require the information indicated in the shaded fields.*

PART A – KEY REPORT INFORMATION

*Report Type: *(select all that apply)* ☐ Original ☐ Supplemental ☐ Final

*1. Operator's OPS-issued Operator Identification Number (OPID): /___/___/___/___/___/___/

*2. Name of Operator: _____

*3. Address of Operator:

*3.a ____
(Street Address)

*3.b
(City)

*3.c State: /___/___/

*3.d Zip Code: /___/___/___/___/___/ - /___/___/___/___/

*4. Local time *(24-hr clock)* and date of the Accident:

/___/___/___/___/ Hour /___/___/ Month /___/___/ Day /___/___/ Year

*5. Location of Accident:

Latitude: /___/___/ . /___/___/___/___/___/

Longitude: -/___/___/___/ . /___/___/___/___/___/

6. National Response Center Report Number (if applicable):

/___/___/___/___/___/___/___/

7. Local time *(24-hr clock)* and date of initial telephonic report to the National Response Center (if applicable):

/___/___/___/___/ Hour /___/___/ Month /___/___/ Day /___/___/ Year

*8. Commodity released: *(select only one, based on predominant volume released)*

☐ Crude Oil

☐ Refined and/or Petroleum Product (non-HVL) which is a Liquid at Ambient Conditions

- ○ Gasoline (non-Ethanol)
- ○ Diesel, Fuel Oil, Kerosene, Jet Fuel
- ○ Mixture of Refined Products (transmix or other mixture)
- ○ Other ⇨ Name: _____

☐ HVL or Other Flammable or Toxic Fluid which is a Gas at Ambient Conditions

- ○ Anhydrous Ammonia
- ○ LPG (Liquefied Petroleum Gas) / NGL (Natural Gas Liquid)
- ○ Other HVL ⇨ Name: _____

☐ CO_2 (Carbon Dioxide)

☐ Biofuel / Alternative Fuel (including ethanol blends)

- ○ Fuel Grade Ethanol
- ○ Ethanol Blend ⇨ % Ethanol: /___/___/
- ○ Biodiesel ⇨ Blend (e.g. B2, B20, B100): B/___/___/___/
- ○ Other ⇨ Name: _____

*9. Estimated volume of commodity released unintentionally: /___/___/___/,/___/___/___/.___/___/ Barrels

*10. Estimated volume of intentional and/or controlled release/blowdown: /___/___/___/,/___/___/___/.___/___/ Barrels
(only reported for HVL and CO_2 Commodities)

*11. Estimated volume of commodity recovered: /___/___/___/,/___/___/___/.___/___/ Barrels

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*12. Were there fatalities? ○ Yes ○ No

If Yes, specify the number in each category:

*12.a Operator employees /___/___/___/___/

*12.b Contractor employees working for the Operator /___/___/___/___/

*12.c Non-Operator emergency responders /___/___/___/___/

*12.d Workers working on the right-of-way, but NOT associated with this Operator /___/___/___/___/

*12.e General public /___/___/___/___/

12.f Total fatalities (sum of above) /___/___/___/___/

*13. Were there injuries requiring inpatient hospitalization? ○ Yes ○ No

If Yes, specify the number in each category:

*13.a Operator employees /___/___/___/___/

*13.b Contractor employees working for the Operator /___/___/___/___/

*13.c Non-Operator emergency responders /___/___/___/___/

*13.d Workers working on the right-of-way, but NOT associated with this Operator /___/___/___/___/

*13.e General public /___/___/___/___/

13.f Total injuries (sum of above) /___/___/___/___/

14. Was the pipeline/facility shut down due to the Accident?

○ Yes ○ No ⇨ Explain: _____

If Yes, complete Questions 14.a and 14.b: *(use local time, 24-hr clock)*

14.a Local time and date of shutdown /___/___/___/___/ (Hour) /___/___/ (Month) /___/___/ (Day) /___/___/ (Year)

14.b Local time pipeline/facility restarted /___/___/___/___/ (Hour) /___/___/ (Month) /___/___/ (Day) /___/___/ (Year) ○ Still shut down* *(*Supplemental Report required)*

*15. Did the commodity ignite? ○ Yes ○ No

*16. Did the commodity explode? ○ Yes ○ No

17. Number of general public evacuated: /___/___/___/,/___/___/___/

18. Time sequence: *(use local time, 24-hour clock)*

18.a Local time Operator identified Accident /___/___/___/___/ (Hour) /___/___/ (Month) /___/___/ (Day) /___/___/ (Year)

18.b Local time Operator resources arrived on site /___/___/___/___/ (Hour) /___/___/ (Month) /___/___/ (Day) /___/___/ (Year)

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PART B – ADDITIONAL LOCATION INFORMATION

*1. Was the origin of the Accident onshore?

O Yes *(Complete Questions 2-12)* O No *(Complete Questions 13-15)*

If **Onshore**:

*2. State: /___/___/

*3. Zip Code: /___/___/___/___/___/ - /___/___/___/___/

4._____ 5_____

City County or Parish

6. Operator-designated location: *(select only one)*

☐ Milepost/Valve Station *(specify in shaded area below)*

☐ Survey Station No. *(specify in shaded area below)*

/ / / / / / / / / / / / / /

7. Pipeline/Facility name:

8. Segment name/ID:

*9. Was Accident on Federal land, other than the Outer Continental Shelf (OCS)? O Yes O No

*10. Location of Accident: *(select only one)*

☐ Totally contained on Operator-controlled property

☐ Originated on Operator-controlled property, but then flowed or migrated off the property

☐ Pipeline right-of-way

*11. Area of Accident (as found): *(select only one)*

☐ Tank, including attached appurtenances

☐ Underground ⇨ Specify: O Under soil

O Under a building O Under pavement

O Exposed due to excavation

O In underground enclosed space (e.g., vault)

O Other _____

Depth-of-Cover (in): /___/,/___/___/___/

☐ Aboveground ⇨ Specify:

O Typical aboveground facility piping or appurtenance

O Overhead crossing

O In or spanning an open ditch

O Inside a building O Inside other enclosed space

O Other _____

☐ Transition Area ⇨ Specify: O Soil/air interface O Wall sleeve O Pipe support or other close contact area

O Other _____

*12. Did Accident occur in a crossing?: O Yes O No

If Yes, specify type below:

☐ Bridge crossing ⇨ Specify: O Cased O Uncased

☐ Railroad crossing ⇨ *(select all that apply)*

O Cased O Uncased O Bored/drilled

☐ Road crossing ⇨ *(select all that apply)*

O Cased O Uncased O Bored/drilled

☐ Water crossing

⇨ Specify: O Cased O Uncased

Name of body of water, if commonly known:

_____

Approx. water depth (ft) at the point of the Accident:

/___/,/___/___/___/

(select only one of the following)

O Shoreline/Bank crossing

O Below water, pipe in bored/drilled crossing

O Below water, pipe buried below bottom (NOT in bored/drilled crossing)

O Below water, pipe on or above bottom

If **Offshore**:

*13. Approximate water depth (ft.) at the point of the Accident:

/___/___/,/___/___/___/

*14. Origin of Accident:

☐ In State waters

⇨ Specify: State: /___/___/

Area: _____

Block/Tract #: /___/___/___/___/___/

Nearest County/Parish: _____

☐ On the Outer Continental Shelf (OCS)

⇨ Specify: Area: _____

Block #: /___/___/___/___/___/

*15. Area of Accident: *(select only one)*

☐ Shoreline/Bank crossing or shore approach

☐ Below water, pipe buried or jetted below seabed

☐ Below water, pipe on or above seabed

☐ Splash Zone of riser

☐ Portion of riser outside of Splash Zone, including riser bend

☐ Platform

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PART C – ADDITIONAL FACILITY INFORMATION

*1. Is the pipeline or facility:
- ☐ Interstate
- ☐ Intrastate

*2. Part of system involved in Accident: *(select only one)*
- ☐ Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances ⇨ ○ Atmospheric or Low Pressure ○ Pressurized
- ☐ Onshore Terminal/Tank Farm Equipment and Piping
- ☐ Onshore Equipment and Piping Associated with Belowground Storage
- ☐ Onshore Pump/Meter Station Equipment and Piping
- ☐ Onshore Pipeline, Including Valve Sites
- ☐ Offshore Platform/Deepwater Port, Including Platform-mounted Equipment and Piping
- ☐ Offshore Pipeline, Including Riser and Riser Bend

*3. Item involved in Accident: *(select only one)*

☐ Pipe ⇨ Specify: ○ Pipe Body ○ Pipe Seam

3.a Nominal diameter of pipe (in): /__/__/./__/__/__/

3.b Wall thickness (in): /__/./__/__/__/

3.c SMYS (Specified Minimum Yield Strength) of pipe (psi): /__/__/__/,/__/__/__/

3.d Pipe specification: _____

3.e Pipe Seam ⇨ Specify:
- ○ Longitudinal ERW - High Frequency
- ○ Longitudinal ERW - Low Frequency
- ○ Longitudinal ERW – Unknown Frequency
- ○ Spiral Welded ERW
- ○ Lap Welded
- ○ Single SAW
- ○ DSAW
- ○ Spiral Welded SAW
- ○ Seamless
- ○ Flash Welded
- ○ Continuous Welded
- ○ Furnace Butt Welded
- ○ Spiral Welded DSAW
- ○ Other _____

3.f Pipe manufacturer: _____

3.g Year of manufacture: /__/__/__/__/

3.h Pipeline coating type at point of Accident ⇨ Specify:
- ○ Fusion Bonded Epoxy
- ○ Coal Tar
- ○ Asphalt
- ○ Polyolefin
- ○ Extruded Polyethylene
- ○ Field Applied Epoxy
- ○ Cold Applied Tape
- ○ Paint
- ○ Composite
- ○ None
- ○ Other _____

☐ Weld, including heat-affected zone ⇨ Specify: ○ Pipe Girth Weld ○ Other Butt Weld ○ Fillet Weld ○ Other_____

If Pipe Girth Weld is selected, complete items 3.a. through h. above. If the values differ on either side of the girth weld, enter one value in 3.a. through h. and list the different value(s) in Part H - Narrative Description of the Accident.

☐ Valve ○ Mainline ⇨ Specify: ○ Butterfly ○ Check ○ Gate ○ Plug ○ Ball ○ Globe ○ Other _____

3.i Mainline valve manufacturer: _____

3.j Year of manufacture: /__/__/__/__/

- ○ Relief Valve
- ○ Auxiliary or Other Valve

- ☐ Pump
- ☐ Meter/Prover
- ☐ Scraper/Pig Trap
- ☐ Sump/Separator
- ☐ Repair Sleeve or Clamp
- ☐ Hot Tap Equipment
- ☐ Stopple Fitting
- ☐ Flange
- ☐ Relief Line
- ☐ Auxiliary Piping (e.g. drain lines)
- ☐ Tubing
- ☐ Instrumentation

☐ Tank/Vessel ⇨ Specify:
- ○ Single Bottom System
- ○ Double Bottom System
- ○ Tank Shell
- ○ Chime
- ○ Roof/Roof Seal
- ○ Roof Drain System
- ○ Mixer
- ○ Pressure Vessel Head or Wall
- ○ Appurtenance
- ○ Other _____

☐ Other _____

4. Year item involved in Accident was installed: /__/__/__/__/

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*5. Material involved in Accident: (*select only one)*

☐ Carbon Steel

☐ Material other than Carbon Steel ⇨ Specify: _____

*6. Type of Accident involved: *(select only one)*

☐ Mechanical Puncture ⇨ Approx. size: /__/__/__/__/./__/in. (axial) by /__/__/__/__/./__/in. (circumferential)

☐ Leak ⇨ Select Type: O Pinhole O Crack O Connection Failure O Seal or Packing O Other

☐ Rupture ⇨ Select Orientation: O Circumferential O Longitudinal O Other _____

Approx. size: /__/__/__/__/./__/ in. (widest opening) by /__/__/__/__/__/./__/in. (length circumferentially or axially)

☐ Overfill or Overflow

☐ Other ⇨ Describe: _____

PART D – ADDITIONAL CONSEQUENCE INFORMATION

1. Wildlife impact: O Yes O No

1.a If Yes, specify all that apply:

☐ Fish/aquatic

☐ Birds

☐ Terrestrial

*2. Soil contamination: O Yes O No

3. Long term impact assessment performed or planned: O Yes O No

4. Anticipated remediation: O Yes O No (not needed)

4.a If Yes, specify all that apply:

☐ Surface water ☐ Groundwater ☐ Soil ☐ Vegetation ☐ Wildlife

*5. Water contamination: O Yes ⇨ *(Complete 5.a – 5.c below)* O No

*5.a Specify all that apply:

☐ Ocean/Seawater

☐ Surface

☐ Groundwater

☐ Drinking water ⇨ *(Select one or both)* O Private Well O Public Water Intake

*5.b Estimated amount released in or reaching water: /__/__/__/,/__/__/__/./__/__/ Barrels

*5.c Name of body of water, if commonly known: _____

*6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? O Yes O No

*7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)? O Yes O No

7.a If Yes, specify HCA type(s): *(select all that apply)*

☐ Commercially Navigable Waterway
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?
O Yes O No

☐ High Population Area
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?
O Yes O No

☐ Other Populated Area
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?
O Yes O No

☐ Unusually Sensitive Area (USA) – Drinking Water
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?
O Yes O No

☐ Unusually Sensitive Area (USA) – Ecological
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?
O Yes O No

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*8. Estimated Property Damage:

8.a Estimated cost of public and non-Operator private property damage
$ /___/___/___/,/___/___/___/,/___/___/___/

8.b Estimated cost of commodity lost $ /___/___/___/,/___/___/___/,/___/___/___/

8.c Estimated cost of Operator's property damage & repairs $ /___/___/___/,/___/___/___/,/___/___/___/

8.d Estimated cost of Operator's emergency response $ /___/___/___/,/___/___/___/,/___/___/___/

8.e Estimated cost of Operator's environmental remediation $ /___/___/___/,/___/___/___/,/___/___/___/

8.f Estimated other costs $ /___/___/___/,/___/___/___/,/___/___/___/

Describe

8.g Total estimated property damage (sum of above) $ /___/___/___/,/___/___/___/,/___/___/___/

PART E – ADDITIONAL OPERATING INFORMATION

*1. Estimated pressure at the point and time of the Accident (psig): /___/___/,/___/___/___/

*2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig) : /___/___/,/___/___/___/

*3. Describe the pressure on the system or facility relating to the Accident: *(select only one*)

☐ Pressure did not exceed MOP
☐ Pressure exceeded MOP, but did not exceed 110% of MOP
☐ Pressure exceeded 110% of MOP

*4. Not including pressure reductions required by PHMSA regulations (such as for repairs and pipe movement), was the system or facility relating to the Accident operating under an established pressure restriction with pressure limits below those normally allowed by the MOP?

☐ No
☐ Yes ⇨ (*Complete 4.a and 4.b below)*

*4.a Did the pressure exceed this established pressure restriction? ○ Yes ○ No

*4.b Was this pressure restriction mandated by PHMSA or the State? ○ PHMSA ○ State ○ Not mandated

*5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2?

☐ No
☐ Yes ⇨ (*Complete 5.a – 5.e below)*

5.a Type of upstream valve used to initially isolate release source: ○ Manual ○ Automatic ○ Remotely Controlled

5.b Type of downstream valve used to initially isolate release source: ○ Manual ○ Automatic ○ Remotely Controlled ○ Check Valve

5.c Length of segment initially isolated between valves (ft): /___/___/___/,/___/___/___/

5.d Is the pipeline configured to accommodate internal inspection tools?

☐ Yes
☐ No ⇨ Which physical features limit tool accommodation? *(select all that apply*)

○ Changes in line pipe diameter
○ Presence of unsuitable mainline valves
○ Tight or mitered pipe bends
○ Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.)
○ Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools)
○ Other ⇨ Describe:_____

5.e For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run?

☐ No
☐ Yes ⇨ Which operational factors complicate execution? *(select all that apply)*

○ Excessive debris or scale, wax, or other wall build-up
○ Low operating pressure(s)
○ Low flow or absence of flow
○ Incompatible commodity
○ Other ⇨ Describe:_____

*5.f Function of pipeline system: *(select only one)*

☐ > 20% SMYS Regulated Trunkline/Transmission
☐ ≤ 20% SMYS Regulated Trunkline/Transmission
☐ > 20% SMYS Regulated Gathering
☐ ≤ 20% SMYS Regulated Gathering

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*6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?

☐ No

☐ Yes ⇨ 6.a Was it operating at the time of the Accident? ○ Yes ○ No

6.b Was it fully functional at the time of the Accident? ○ Yes ○ No

6.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident? ○ Yes ○ No

6.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident? ○ Yes ○ No

*7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?

☐ No

☐ Yes ⇨ 7.a Was it operating at the time of the Accident? ○ Yes ○ No

7.b Was it fully functional at the time of the Accident? ○ Yes ○ No

7.c Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident? ○ Yes ○ No

7.d Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident? ○ Yes ○ No

*8. How was the Accident initially identified for the Operator? *(select only one)*

☐ CPM leak detection system or SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations)
☐ Static Shut-in Test or Other Pressure or Leak Test
☐ Controller
☐ Air Patrol
☐ Notification from Public
☐ Notification from Third Party that caused the Accident
☐ Local Operating Personnel, including contractors
☐ Ground Patrol by Operator or its contractor
☐ Notification from Emergency Responder
☐ Other _____

*8.a If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 8, specify the following: *(select only one)*

○ Operator employee ○ Contractor working for the Operator

*9. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contr buting factor to the Accident? *(select only one)*

☐ Yes, but the investigation of the control room and/or controller actions has not yet been completed by the Operator *(Supplemental Report required)*

☐ No, the facility was not monitored by a controller(s) at the time of the Accident

☐ No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: *(provide an explanation for why the Operator did not investigate)*

_____
_____
_____

☐ Yes, specify investigation result(s): *(select all that apply)*

○ Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue

○ Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue *(provide an explanation for why not)*

_____
_____
_____

○ Investigation identified no control room issues
○ Investigation identified no controller issues
○ Investigation identified incorrect controller action or controller error
○ Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response
○ Investigation identified incorrect procedures
○ Investigation identified incorrect control room equipment operation
○ Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response
○ Investigation identified areas other than those above ⇨ Descr be: _____

_____
_____
_____

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PART F – DRUG & ALCOHOL TESTING INFORMATION

*1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

O No

O Yes ⇨ *1.a Specify how many were tested: /___/___/

*1.b Specify how many failed: /___/___/

*2. As a result of this Accident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

O No

O Yes ⇨ *2.a Specify how many were tested: /___/___/

*2.b Specify how many failed: /___/___/

PART G – APPARENT CAUSE

Select only one box from PART G in the shaded column on the left representing the APPARENT Cause of the Accident, and answer the questions on the right. Describe secondary, contributing, or root causes of the Accident in the narrative (PART H).

G1 - Corrosion Failure – *only one **sub-cause** can be picked from shaded left-hand column

☐ **External Corrosion**

*1. Results of visual examination:

O Localized Pitting O General Corrosion

O Other _____

*2. Type of corrosion: *(select all that apply)*

O Galvanic O Atmospheric O Stray Current O Microbiological O Selective Seam

O Other _____

*3. The type(s) of corrosion selected in Question 2 is based on the following: *(select all that apply)*

O Field examination O Determined by metallurgical analysis

O Other _____

*4. Was the failed item buried under the ground?

O Yes ⇨ *4.a Was failed item considered to be under cathodic protection at the time of the Accident?

O Yes ⇨ Year protection started: /___/___/___/___/

O No

*4.b Was shielding, tenting, or disbonding of coating evident at the point of the Accident?

O Yes O No

*4.c Has one or more Cathodic Protection Survey been conducted at the point of the Accident?

O Yes, CP Annual Survey ⇨ Most recent year conducted: /___/___/___/___/

O Yes, Close Interval Survey ⇨ Most recent year conducted: /___/___/___/___/

O Yes, Other CP Survey ⇨ Most recent year conducted: /___/___/___/___/

O No

O No ⇨ 4.d Was the failed item externally coated or painted? O Yes O No

*5. Was there observable damage to the coating or paint in the vicinity of the corrosion?

O Yes O No

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☐ **Internal Corrosion**

*6. Results of visual examination:
O Localized Pitting O General Corrosion O Not cut open
O Other _____

*7. Cause of corrosion: *(select all that apply)*
O Corrosive Commodity O Water drop-out/Acid O Microbiological O Erosion
O Other _____

*8. The cause(s) of corrosion selected in Question 7 is based on the following: *(select all that apply)*
O Field examination O Determined by metallurgical analysis
O Other _____

*9. Location of corrosion: *(select all that apply)*
O Low point in pipe O E bow O Other_____

*10. Was the commodity treated with corrosion inhibitors or biocides? O Yes O No

11. Was the interior coated or lined with protective coating? O Yes O No

12. Were cleaning/dewatering pigs (or other operations) routinely utilized?
O Not applicable - Not mainline pipe O Yes O No

13. Were corrosion coupons routinely utilized?
O Not applicable - Not mainline pipe O Yes O No

Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Tank/Vessel.

14. List the year of the most recent inspections:
14.a API Std 653 Out-of-Service Inspection /__/__/__/__/ O No Out-of-Service Inspection completed
14.b API Std 653 In-Service Inspection /__/__/__/__/ O No In-Service Inspection completed

Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.

15. Has one or more internal inspection tool collected data at the point of the Accident?
O Yes O No

15.a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:
O Magnetic Flux Leakage Tool /__/__/__/__/
O Ultrasonic /__/__/__/__/
O Geometry /__/__/__/__/
O Caliper /__/__/__/__/
O Crack /__/__/__/__/
O Hard Spot /__/__/__/__/
O Combination Tool /__/__/__/__/
O Transverse Field/Triaxial /__/__/__/__/
O Other _____ /__/__/__/__/

16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?
O Yes ⇨ Most recent year tested: /__/__/__/__/ Test pressure (psig): /__/__/__/__/__/
O No

17. Has one or more Direct Assessment been conducted on this segment?
O Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: /__/__/__/__/
O Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: /__/__/__/__/
O No

18. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?
O Yes O No

18.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:
O Radiography /__/__/__/__/
O Guided Wave Ultrasonic /__/__/__/__/
O Handheld Ultrasonic Tool /__/__/__/__/
O Wet Magnetic Particle Test /__/__/__/__/
O Dry Magnetic Particle Test /__/__/__/__/
O Other _____ /__/__/__/__/

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G2 - Natural Force Damage - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Earth Movement, NOT due to Heavy Rains/Floods**	1. Specify: ○ Earthquake ○ Subsidence ○ Landslide ○ Other _____
☐ **Heavy Rains/Floods**	2. Specify: ○ Washout/Scouring ○ Flotation ○ Mudslide ○ Other _____
☐ **Lightning**	3. Specify: ○ Direct hit ○ Secondary impact such as resulting nearby fires
☐ **Temperature**	4. Specify: ○ Thermal Stress ○ Frost Heave ○ Frozen Components ○ Other _____
☐ **High Winds**	
☐ **Other Natural Force Damage**	*5. Describe: _____

Complete the following if any Natural Force Damage sub-cause is selected.

*6. Were the natural forces causing the Accident generated in conjunction with an extreme weather event? ○ Yes ○ No

*6.a If Yes, specify: (*select all that apply*) ○ Hurricane ○ Tropical Storm ○ Tornado ○ Other _____

G3 – Excavation Damage - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Excavation Damage by Operator (First Party)**	
☐ **Excavation Damage by Operator's Contractor (Second Party)**	
☐ **Excavation Damage by Third Party**	
☐ **Previous Damage due to Excavation Activity**	**Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.**

1. Has one or more internal inspection tool collected data at the point of the Accident?
○ Yes ○ No

1.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:

- ○ Magnetic Flux Leakage /__/__/__/__/
- ○ Ultrasonic /__/__/__/__/
- ○ Geometry /__/__/__/__/
- ○ Caliper /__/__/__/__/
- ○ Crack /__/__/__/__/
- ○ Hard Spot /__/__/__/__/
- ○ Combination Tool /__/__/__/__/
- ○ Transverse Field/Triaxial /__/__/__/__/
- ○ Other _____ /__/__/__/__/

2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained? ○ Yes ○ No

3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?

○ Yes ⇨ Most recent year tested: /__/__/__/__/
Test pressure (psig): /__/__/,/__/__/__/
○ No

4. Has one or more Direct Assessment been conducted on the pipeline segment?

○ Yes, and an investigative dig was conducted at the point of the Accident
⇨ Most recent year conducted: /__/__/__/__/
○ Yes, but the point of the Accident was not identified as a dig site
⇨ Most recent year conducted: /__/__/__/__/
○ No

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5. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?

O Yes O No

5.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:

O Radiography	/__/__/__/__/
O Guided Wave Ultrasonic	/__/__/__/__/
O Handheld Ultrasonic Tool	/__/__/__/__/
O Wet Magnetic Particle Test	/__/__/__/__/
O Dry Magnetic Particle Test	/__/__/__/__/
O Other _____	/__/__/__/__/

Complete the following if Excavation Damage by Third Party is selected as the sub-cause.

*6. Did the Operator get prior notification of the excavation activity? O Yes O No

*6.a If Yes, Notification received from: *(select all that apply)* O One-Call System O Excavator O Contractor O Landowner

Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.

*7. Do you want PHMSA to upload the following information to CGA-DIRT (www.cga-dirt.com)? OYes O No

*8. Right-of-Way where event occurred: *(select all that apply)*

☐ Public ⇨ Specify: O City Street O State Highway O County Road O Interstate Highway O Other

☐ Private ⇨ Specify: O Private Landowner O Private Business O Private Easement

☐ Pipeline Property/Easement
☐ Power/Transmission Line
☐ Railroad
☐ Dedicated Public Utility Easement
☐ Federal Land
☐ Data not collected
☐ Unknown/Other

*9. Type of excavator: *(select only one)*

O Contractor O County O Developer O Farmer O Municipality O Occupant
O Railroad O State O Utility O Data not collected O Unknown/Other

*10. Type of excavation equipment: *(select only one)*

O Auger O Backhoe/Trackhoe O Boring O Drilling O Directional Drilling
O Explosives O Farm Equipment O Grader/Scraper O Hand Tools O Milling Equipment
O Probing Device O Trencher O Vacuum Equipment O Data not collected O Unknown/Other

*11. Type of work performed: *(select only one)*

O Agriculture O Cable TV O Curb/Sidewalk O Building Construction O Building Demolition
O Drainage O Driveway O Electric O Engineering/Surveying O Fencing
O Grading O Irrigation O Landscaping O Liquid Pipeline O Milling
O Natural Gas O Pole O Public Transit Authority O Railroad Maintenance O Road Work
O Sewer (Sanitary/Storm) O Site Development O Steam O Storm Drain/Culvert O Street Light
O Telecommunications O Traffic Signal O Traffic Sign O Water O Waterway Improvement
O Data not collected O Unknown/Other

*12. Was the One-Call Center notified? O Yes O No

*12.a If Yes, specify ticket number: /__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/

*12.b If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:

_____

*13. Type of Locator: O Utility Owner O Contract Locator O Data not collected O Unknown/Other

*14. Were facility locate marks vis ble in the area of excavation? O No O Yes O Data not collected O Unknown/Other

*15. Were facilities marked correctly? O No O Yes O Data not collected O Unknown/Other

*16. Did the damage cause an interruption in service? O No O Yes O Data not collected O Unknown/Other

*16.a If Yes, specify duration of the interruption: / / / / / hours

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*17. Description of the CGA-DIRT Root Cause *(select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well)*:

☐ One-Call Notification Practices Not Sufficient: *(select only one)*

- ○ No notification made to the One-Call Center
- ○ Notification to One-Call Center made, but not sufficient
- ○ Wrong information provided

☐ Locating Practices Not Sufficient: *(select only one)*

- ○ Facility could not be found/located
- ○ Facility marking or location not sufficient
- ○ Facility was not located or marked
- ○ Incorrect facility records/maps

☐ Excavation Practices Not Sufficient: *(select only one)*

- ○ Excavation practices not sufficient (other)
- ○ Failure to maintain clearance
- ○ Failure to maintain the marks
- ○ Failure to support exposed facilities
- ○ Failure to use hand tools where required
- ○ Failure to verify location by test-hole (pot-holing)
- ○ Improper backfilling

☐ One-Call Notification Center Error

☐ Abandoned Facility

☐ Deteriorated Facility

☐ Previous Damage

☐ Data Not Collected

☐ Other / None of the Above *(explain)*_____

_____

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G4 - Other Outside Force Damage - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Accident**	
☐ **Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation**	1. Vehicle/Equipment operated by: *(select only one)* ○ Operator ○ Operator's Contractor ○ Third Party
☐ **Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring**	*2. Select one or more of the following IF an extreme weather event was a factor: ○ Hurricane ○ Tropical Storm ○ Tornado ○ Heavy Rains/Flood ○ Other _____
☐ **Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation**	
☐ **Electrical Arcing from Other Equipment or Facility**	
☐ **Previous Mechanical Damage NOT Related to Excavation**	**Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.** 3. Has one or more internal inspection tool collected data at the point of the Accident? ○ Yes ○ No 3.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: ○ Magnetic Flux Leakage /__/__/__/__/ ○ Ultrasonic /__/__/__/__/ ○ Geometry /__/__/__/__/ ○ Caliper /__/__/__/__/ ○ Crack /__/__/__/__/ ○ Hard Spot /__/__/__/__/ ○ Combination Tool /__/__/__/__/ ○ Transverse Field/Triaxial /__/__/__/__/ ○ Other _____ /__/__/__/__/ 4. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained? ○ Yes ○ No 5. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident? ○ Yes ⇨ Most recent year tested: /__/__/__/__/ Test pressure (psig): /__/__/,/__/__/__/ ○ No 6. Has one or more Direct Assessment been conducted on the pipeline segment? ○ Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: /__/__/__/__/ ○ Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: /__/__/__/__/ ○ No *(This section continued on next page with Question 7.)*

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	7. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002? O Yes O No 7.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted: O Radiography /__/__/__/__/ O Guided Wave Ultrasonic /__/__/__/__/ O Handheld Ultrasonic Tool /__/__/__/__/ O Wet Magnetic Particle Test /__/__/__/__/ O Dry Magnetic Particle Test /__/__/__/__/ O Other _____ /__/__/__/__/
☐ **Intentional Damage**	*8. Specify: O Vandalism O Terrorism O Theft of transported commodity O Theft of equipment O Other _____
☐ **Other Outside Force Damage**	*9. Descr be: _____

G5 - Material Failure of Pipe or Weld

Use this section to report material failures ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."

*Only one **sub-cause** can be picked from shaded left-hand column

1. The sub-cause selected below is based on the following: *(select all that apply)*

☐ Field Examination ☐ Determined by Metallurgical Analysis ☐ Other Analysis_____

☐ Sub-cause is Tentative or Suspected; Still Under Investigation *(Supplemental Report required)*

☐ **Construction-, Installation-, or Fabrication-related**	2. List contributing factors: *(select all that apply)* ☐ Fatigue- or V bration-related: O Mechanically-induced prior to installation (such as during transport of pipe) O Mechanical V bration O Pressure-related O Thermal O Other _____ ☐ Mechanical Stress ☐ Other _____
☐ **Original Manufacturing-related (NOT girth weld or other welds formed in the field)**	
☐ **Environmental Cracking-related**	3. Specify: O Stress Corrosion Cracking O Sulfide Stress Cracking O Hydrogen Stress Cracking O Other

Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.

*4. Additional factors: *(select all that apply)* O Dent O Gouge O Pipe Bend O Arc Burn O Crack O Lack of Fusion
O Lamination O Buckle O Wrinkle O Misalignment O Burnt Steel
O Other _____

*5. Has one or more internal inspection tool collected data at the point of the Accident? O Yes O No

*5.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:

O Magnetic Flux Leakage Tool /__/__/__/__/
O Ultrasonic /__/__/__/__/
O Geometry /__/__/__/__/
O Caliper /__/__/__/__/
O Crack /__/__/__/__/
O Hard Spot /__/__/__/__/
O Combination Tool /__/__/__/__/
O Transverse Field/Triaxial /__/__/__/__/
O Other _____ /__/__/__/__/

*6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?
O Yes ⇨ Most recent year tested: /__/__/__/__/ Test pressure (psig): /__/__/,/__/__/__/
O No

*7. Has one or more Direct Assessment been conducted on the pipeline segment?
O Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: /__/__/__/__/
O Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: /__/__/__/__/
O No

*8. Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002?
O Yes O No

*8.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:

O Radiography /__/__/__/__/
O Guided Wave Ultrasonic /__/__/__/__/
O Handheld Ultrasonic Tool /__/__/__/__/
O Wet Magnetic Particle Test /__/__/__/__/
O Dry Magnetic Particle Test /__/__/__/__/
O Other /__/__/__/__/

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G6 - Equipment Failure - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Malfunction of Control/Relief Equipment**	*1. Specify: *(select all that apply)* ○ Control Valve ○ Instrumentation ○ SCADA ○ Communications ○ Block Valve ○ Check Valve ○ Relief Valve ○ Power Failure ○ Stopple/Control Fitting ○ ESD System Failure ○ Other _____
☐ **Pump or Pump-related Equipment**	*2. Specify: ○ Seal/Packing Failure ○ Body Failure ○ Crack in Body ○ Appurtenance Failure ○ Other _____
☐ **Threaded Connection/Coupling Failure**	3. Specify: ○ Pipe Nipple ○ Valve Threads ○ Mechanical Coupling ○ Threaded Pipe Collar ○ Threaded Fitting ○ Other _____
☐ **Non-threaded Connection Failure**	*4. Specify: ○ O-Ring ○ Gasket ○ Seal (NOT pump seal) or Packing ○ Other _____
☐ **Defective or Loose Tubing or Fitting**	
☐ **Failure of Equipment Body (except Pump), Tank Plate, or other Material**	
☐ **Other Equipment Failure**	*5. Describe: _____ _____

Complete the following if any Equipment Failure sub-cause is selected.

*6. Additional factors that contributed to the equipment failure: *(select all that apply)*

- ○ Excessive v bration
- ○ Overpressurization
- ○ No support or loss of support
- ○ Manufacturing defect
- ○ Loss of electricity
- ○ Improper installation
- ○ Mismatched items (different manufacturer for tubing and tubing fittings)
- ○ Dissimilar metals
- ○ Breakdown of soft goods due to compatibility issues with transported commodity
- ○ Valve vault or valve can contributed to the release
- ○ Alarm/status failure
- ○ Misalignment
- ○ Thermal stress
- ○ Other _____

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G7 - Incorrect Operation - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage**	
☐ **Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow**	*1. Specify: ○ Valve misalignment ○ Incorrect reference data/calculation ○ Miscommunication ○ Inadequate monitoring ○ Other _____
☐ **Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure**	
☐ **Pipeline or Equipment Overpressured**	
☐ **Equipment Not Installed Properly**	
☐ **Wrong Equipment Specified or Installed**	
☐ **Other Incorrect Operation**	*2. Describe: _____

Complete the following if any Incorrect Operation sub-cause is selected.

*3. Was this Accident related to: *(select all that apply)*

- ○ Inadequate procedure
- ○ No procedure established
- ○ Failure to follow procedure
- ○ Other: _____

*4. What category type was the activity that caused the Accident:

- ○ Construction
- ○ Commissioning
- ○ Decommissioning
- ○ Right-of-Way activities
- ○ Routine maintenance
- ○ Other maintenance
- ○ Normal operating conditions
- ○ Non-routine operating conditions (abnormal operations or emergencies)

*5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program? ○ Yes ○ No

*5.a If Yes, were the individuals performing the task(s) qualified for the task(s)?

- ○ Yes, they were qualified for the task(s)
- ○ No, but they were performing the task(s) under the direction and observation of a qualified individual
- ○ No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual

G8 – Other Accident Cause - *only one **sub-cause** can be picked from shaded left-hand column

☐ **Miscellaneous**	*1. Describe: _____
☐ **Unknown**	*2. Specify: ○ Investigation complete, cause of Accident unknown ○ Still under investigation, cause of Accident to be determined* *(*Supplemental Report required)*

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PART H – NARRATIVE DESCRIPTION OF THE ACCIDENT *(Attach additional sheets as necessary)*

***PART I – PREPARER AND AUTHORIZED SIGNATURE**

*Preparer's Name (type or print)

Preparer's Telephone Number

Preparer's Title (type or print)

Preparer's E-mail Address

Preparer's Facsimile Number

Authorized Signature

*Date

*Authorized Signature Telephone Number

*Authorized Signature's Name (type or print)

Authorized Signature's Title (type or print)

Au horized Signature's E-mail Address

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QUALIFIED INDIVIDUAL (QI) NOTIFICATION EXERCISE

INTERNAL EXERCISE DOCUMENTATION

1. Date performed: _____
2. Exercise or actual response: _____
3. Person initiating exercise: _____
4. Name of person notified: _____
   Is this person identified in the response plan as the: ☐ QI ☐ AQI
5. Time initiated: _____
   Time QI or AQI responded: _____
6. Method used to contact:
   ☐ Telephone ☐ Pager ☐ Radio
   ☐ Other _____
7. Description of notification procedure:
   _____
   _____
   _____
   _____
   _____
8. Identify which components of your response plan were exercised during this particular exercise:

Organizational Design

- ☐ Notifications
- ☐ Staff mobilization
- ☐ Ability to operate within the response management system described in the plan

Operational Response

- ☐ Discharge control
- ☐ Assessment of discharge
- ☐ Containment of discharge
- ☐ Recovery of spilled material
- ☐ Protection of economically and environmentally sensitive areas
- ☐ Disposal of recovered product

Response Support

- ☐ Communications
- ☐ Transportation
- ☐ Personnel support
- ☐ Equipment maintenance and support
- ☐ Procurement
- ☐ Documentation

Certifying Signature: _____ Name (Printed): _____
Date: _____

SPILL MANAGEMENT TEAM TABLETOP EXERCISE

INTERNAL EXERCISE DOCUMENTATION

1. Date(s) performed: _____

2. Exercise or actual response? _____ Exercise _____ Actual Response
   If an exercise, announced or unannounced? _____ Announced _____ Unannounced

3. Location of tabletop: _____

4. Time started: _____ Time completed: _____

5. Response plan scenario used (check one):

   _____ Average most probable discharge
   _____ Maximum most probable discharge
   _____ Worst case discharge

   Size of (simulated) spill _____

6. Describe how the following objectives were exercised:

   a) Spill Management Team's knowledge of oil-spill response plan:

   b) Proper notifications:

   c) Communications system:

   d) Spill Management Team's ability to access contracted oil spill removal organizations:

   e) Spill Management Team's ability to coordinate spill response with On-Scene Coordinator, state, and applicable agencies:

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SPILL MANAGEMENT TEAM TABLETOP EXERCISE

INTERNAL EXERCISE DOCUMENTATION (Cont'd)

f) Spill Management Team's ability to access sensitive site and resource information in the Area Contingency Plan:

_____
_____
_____
_____

7. Identify which of the 15 core components of your response plan were exercised during this particular exercise.

Organization Design:

_____ 1. Notification
_____ 2. Staff Mobilization
_____ 3. Ability to operate within management system

Operational Response:

_____ 4. Discharge Control
_____ 5. Assessment
_____ 6. Containment
_____ 7. Recovery
_____ 8. Protection
_____ 9. Disposal

Response Support:

_____ 10. Communications
_____ 11. Transportation
_____ 12. Personnel Support
_____ 13. Equipment Maintenance and Support
_____ 14. Procurement
_____ 15. Documentation

8. Attach description of lesson(s) learned and person(s) responsible for follow up of corrective measures.

_____
Certifying Signature

Retain this form for a minimum of three (3) years (for USCG/PHMSA/BSEE) or five (5) years (for EPA).

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CRUDE OIL MSDS

MATERIAL SAFETY DATA SHEET

CRUDE OIL

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product.

1. PRODUCT and COMPANY IDENTIFICATION

Material Identity	Crude Oil	
Trade Name(s)	Oriente, Cano Limon, Line 63, Shell-Ventura, SJV Light, Rainbow, West Texas Inter-Cushing, Peace River-Canadian, Federated Crude-Canadian, Pembina Crude-Canadian, Forcados, Cabinda, Basrah Light, Basrah, Arab Medium, Elang Crude, Girassol	
Other Name(s)	Earth Oil, Petroleum Oil, Rock Oil, Zafiro	
Chemical Description	This material is a C1 to C50 hydrocarbon liquid which contains approximately .9 to 2.8 wt% sulfur compounds	
Manufacturer's Address	BP West Coast Products LLC Carson Business Unit 1801 E. Sepulveda Boulevard Carson, California 90749-6210	BP West Coast Products LLC Cherry Point Business Unit 4519 Grandview Road Blaine, Washington 98230
Telephone Numbers	Emergency Health Information:	1 (800) 447-8735

2. COMPONENTS and EXPOSURE LIMITS

Component[1]	CAS No.	% Composition By Volume[2]		Exposure Limits ACGIH TLV	Exposure Limits OSHA PEL[3]	Units	Type
CRUDE OIL, PETROLEUM	8002-05-9	EQ	100	N/AP	N/AP		
which contains:							
BUTANE	106-97-8	AP	0.8 to 1	800	800	pm	TWA
HEXANE (N-HEXANE)	110-54-3	AP	0.3 to 1	50 skin	50	ppm	TWA
ISOPENTANE	78-78-4	AP	0.3 to 1.5	N/AP 600	750 600	ppm ppm	STEL TWA
PENTANE	109-66-0	AP	1.5 to 2.5	N/AP 600	750 600	ppm ppm	STEL TWA
Other applicable exposure guidelines:							
COAL TAR PITCH VOLATILES, AS BENZENE SOLUBLES [(4)]	65996-93-2			0.2	0.2	mg/m3	TWA
OIL MIST, MINERAL	8012-95-1			10 5	N/AP 5	mg/m3 mg/m3	STEL TWA
STODDARD SOLVENT	8052-41-3			100	100	ppm	TWA

Stoddard Solvent exposure limits are listed as an exposure guideline for hydrocarbon vapors that may be similar to those derived from crude oil.

Since specific exposure standards or control limits have not been established for this material, the exposure limits shown here are suggested as minimum control guidelines.

[1] Carcinogen displayed after Component Name. Listed by [(1)] NTP, [(2)] IARC, [(3)] OSHA, [(4)] Other

[2] See Abbreviations on last page

[3] The OSHA exposure limits were changed in 1993 due to a federal court ruling. ARCO has chosen to list the 1989 OSHA exposure limits in this document as they are generally more stringent and therefore more protective than the current exposure limits. (Refer to 29 CFR 1910.1000).

3. HAZARD IDENTIFICATION

IMMEDIATE HAZARDS

DANGER

HIGHLY FLAMMABLE! OSHA/NFPA Class 1B flammable liquid. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME! CONTAINS PETROLEUM DISTILLATES! Avoid breathing vapors or mists. Use only with adequate ventilation. If swallowed, do not induce vomiting since aspiration into the lungs may cause chemical pneumonia. Obtain prompt medical attention.

May cause irritation or more serious skin disorders! May be harmful if inhaled! May cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing. May cause irregular heartbeats. Avoid prolonged or repeated liquid, mist, and vapor contact with eyes, skin, and respiratory tract.

Wash hands thoroughly after handling.

Sulfur compounds in this material may decompose to release hydrogen sulfide gas which may accumulate to potentially lethal concentrations in enclosed air spaces. Vapor concentrations of hydrogen sulfide above 50 ppm, or prolonged exposure at lower concentrations, may saturate human odor perceptions so that the smell of gas may not be apparent. DO NOT DEPEND ON THE SENSE OF SMELL TO DETECT HYDROGEN SULFIDE!

Long-term tests show that similar crude oils have produced skin tumors on laboratory animals.

Crude oils contain some polycyclic aromatic hydrocarbons which have been shown to be carcinogenic after prolonged or repeated skin contact in laboratory animals.

Routes of Exposure	Signs and Symptoms
Inhalation (Primary)	Vapors or mists from this material, at concentrations greater than the recommended exposure limits in Section 2, can cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing. Airborne concentrations above the recommended exposure limits are not anticipated during normal workplace activities due to the slow evaporation of this material at ambient temperatures. Exposure to moderate airborne concentrations of hydrogen sulfide (less than 50 ppm) can result in irritation of the eyes, nose and throat, headache, dizziness, shortness of breath, nausea and nervousness. Exposure to hydrogen sulfide vapor above 200 ppm may cause irritation of mucous membranes, inflammation of the lungs, accumulation of fluid in the lungs, irregular heartbeats, unconsciousness with convulsions or impaired breathing with suffocation. Exposure to higher concentrations of hydrogen sulfide vapor (above 500 ppm) may cause rapid death.
Eye Contact	May cause slight eye irritation.
Skin Contact	Moderate skin irritation may occur upon short-term exposure. Exposure to sunlight may increase the degree of skin irritation. Absorption through the skin may occur and produce toxic effects (see Summary of Chronic Hazards).
Ingestion	May cause irritation of the mouth, throat and gastrointestinal tract leading to nausea, vomiting, diarrhea, and restlessness. May cause headache, dizziness, drowsiness, loss of coordination, fatigue, nausea and labored breathing. ASPIRATION HAZARD: Aspiration into the lungs may cause chemical pneumonia. This material can enter the lungs during swallowing or vomiting and may cause lung inflammation and damage which in severe cases may be fatal.

Summary of Chronic Hazards and Special Health Effects

Personnel with preexisting central nervous system (CNS) disease, skin disorders, or chronic respiratory diseases should be evaluated by an appropriate health professional before exposure to this material.

Prolonged/repeated skin exposure, inhalation or ingestion of this material may result in adverse dermal or systemic effects. Avoid prolonged or repeated exposure.
May be harmful if absorbed through the skin. Prolonged or repeated contact may create cancer risk, organ damage, and adversely affect reproduction, fetal development and fetal survival. Avoid all skin contact.

Neurotoxic effects have been associated with n-hexane, a component of this material. Avoid prolonged or repeated exposure.

See Section 11 for Additional Toxicological Information.

4. EMERGENCY and FIRST AID

Inhalation Immediately remove personnel to area of fresh air. For respiratory distress, give oxygen, rescue breathing, or administer CPR (cardiopulmonary resuscitation) if necessary. Obtain prompt medical attention.

Eye Contact Flush eyes with clean, low-pressure water for at least 15 minutes, occasionally lifting the eyelids. If pain or redness persists after flushing, obtain medical attention.

Skin Contact Immediately remove contaminated clothing. Wash affected skin thoroughly with soap and water. If irritation persists, obtain medical attention.

Ingestion Do not induce vomiting since aspiration into the lungs may cause lipoid pneumonia. Obtain prompt medical attention.

Emergency Medical Treatment Procedures See above procedures. Personnel with pre-existing central nervous system disease, skin disorders, chronic respiratory diseases, or impaired liver of kidney function should avoid exposure to this product.

5. FIRE and EXPLOSION

Flash Point (Method)* Based on NFPA Petroleum, Crude		AP 20°F to 90°F	**NFPA Hazard Rating:**
Autoignition Temperature (Method)*		N/DA	**Health:** 2 = Moderate
Flammable Limits (% Vol. in Air*	**Lower**	AP 1 +	**Fire:** 3 = High
	Upper	AP 8 +	**Reactivity:** 0 = Insignificant
* At Normal Atmospheric Temperature and Pressure	+ Based on NFPA 325		**Special:**

Fire and Explosion Hazards HIGHLY FLAMMABLE! This material releases flammable 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.

Flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

Open top tanks involved in a fire have a potential for "boil-over" if water or water-in-oil emulsion is at the bottom of the tank. Boil-over may result in a large expulsion of burning oil from the tank, greatly increasing the fire area.

Extinguishing Media Foam, Dry chemical, Carbon dioxide (CO2)

Water and water fog can cool the fire but may not extinguish the fire.

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. Cool tanks and containers exposed to fire with water. If firefighters cannot work upwind to the fire, respiratory protective equipment must be worn unless and until atmospheric monitoring indicates that such protection is not required. Improper use of water and extinguishing media containing water may cause frothing which can spread the fire over a larger area. Water fog or spray are of value for cooling tank shells and surfaces exposed to fire, but may not achieve extinguishment.

6. ACCIDENTAL RELEASE MEASURES

Precautions if Material is Spilled or Released

Contain spill, evacuate non-essential personnel, and safely stop flow. On hard surfaces, spilled material may create a slipping hazard. Equip cleanup crews with proper protective equipment (as specified in Section 8) and advise of hazards. Clean up by recovering as much spilled or contaminated materials as possible and placing into closed containers. Consult with an environmental professional for the federal, state and local cleanup and reporting requirements for spills and releases.

7. HANDLING and STORAGE

Handling, Storage and Decontamination Procedures

Store and transport in accordance with all applicable laws. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME! KEEP CONTAINERS CLOSED, PLAINLY LABELED AND OUT OF CLOSED VEHICLES! Containers should be able to withstand pressures expected from warming or cooling in storage. Ground all drums and transfer vessels when handling. Store in cool (80°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 (NEC).

KEEP OUT OF REACH OF CHILDREN!

Empty containers retain some liquid and vapor residues, and hazard precautions must be observed when handling empty containers.

For determining National Electrical Code (NEC) Hazardous (Classified) location requirements for electrical installations, consider this material Class 1, Group D.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Where possible, use adequate ventilation to keep vapor and mist concentrations of this material below the Occupational Exposure Limits shown in Section 2. Electrical equipment should comply with National Electrical Code (NEC) standards (see Section 7).

Respiratory

Where there is potential for exposure to hydrogen sulfide gas in excess of the permissible exposure limit, a NIOSH/MSHA-approved supplied-air respirator operated in positive pressure mode should be worn.

If hydrogen sulfide gas is not present in excess of permissible exposure limits, a NIOSH/MSHA-approved air-purifying respirator with an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations of hydrocarbon vapor may exceed the exposure limits in Section 2. Where work conditions may generate airborne mists of the material, also use a high-efficiency particulate pre-filter. Consult a health and safety professional for guidance in respirator selection. Respirator use should comply with OSHA 29 CFR 910.134.

CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of the air-purifying respirator.

Eyes

Eye protection should be worn. If there is potential for splashing or spraying, chemical protective goggles and/or a face shield should be worn. If contact lenses are worn, consult an eye specialist or a safety professional for additional precautions. Suitable eye wash water should be available in case of eye contact with this material.

Skin

Avoid all skin contact with this material. If conditions of use present any potential for skin contact, clean and impervious clothing such as gloves, apron, boots, and facial protection should be worn. Neoprene, Nitrile, Butyl Rubber or Viton glove material is recommended. When working around equipment or processes which may create the potential for skin contact, full body coverage should be worn, which consist of impervious boots and oil-resistant coated Tyvek suit or other impervious jacket and pants.

Non-impervious clothing which accidentally becomes contaminated with this material should be removed promptly and not reworn until the clothing is washed thoroughly and the contamination is effectively removed. Discard soaked leather goods.

Other Hygienic and Work Practices	Use good personal hygiene practices. If skin contact should occur, material should be removed from the skin with a waterless hand cleaner, and the affected area should then be washed with a mild soap and water. Wash hands and other exposed areas thoroughly before eating, drinking, smoking or using toilet facilities.

9. PHYSICAL and CHEMICAL PROPERTIES

Boiling Point:	AP -54°F to 1100°F
Viscosity Units, Temp. (Method):	N/DA
Dry Point:	N/AP
Freezing Point:	N/DA
Vapor Pressure, Temp. (Method):	AP 1 to 2 at 100°F (REID-PSIA)
Volatile Characteristics:	Appreciable
Specific Gravity (H_2O = 1 @ 39.2°F):	AP 0.88
Vapor Sp. Gr. (Air = 1.0 @ 60°F - 90°F):	N/DA
Solubility in Water:	Negligible
PH:	N/AP
Appearance and Odor:	Thick light yellow to dark black colored liquid. Petroleum hydrocarbon odor.
Other Physical and Chemical Properties:	Total sulfur = approx. 1.1% - 2.8% Hydrogen sulfide content is less than 5 ppm dissolved in liquid Vanadium = approx. 210 ppm

10. STABILITY and REACTIVITY

Stability	Stable
Hazardous Polymerization	Not expected to occur.
Other Chemical Reactivity	N/AP

Conditions to Avoid	Heat, sparks, and open flame.
Materials to Avoid	Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.
Hazardous or Decomposition Products	Burning or excessive heating may produce carbon monoxide and other harmful gases or vapors including oxides of sulfur and nitrogen.

11. TOXICOLOGICAL INFORMATION

Toxicological Information	The information found in this section is written for medical, toxicology, occupational health and safety professionals. This section provides technical information on the toxicity testing of this or similar materials or its components. If clarification of the technical content is needed, consult a professional in the areas of expertise listed above.
Prolonged/ Repeated Exposures	IARC has determined there is "limited evidence for the carcinogenicity in experimental animals of crude oil" and "inadequate evidence for the carcinogenicity in humans of crude oil." IARC concludes that "crude oil is not classifiable as to its carcinogenicity to humans (Group 3)." Crude oil administered orally to pregnant rats during gestation produced increased number of resorptions and decrease in fetal weight and length.

Exposure to N-hexane at concentrations considerably higher than the current permissible exposure limit has reportedly been associated with peripheral neuropathy.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Maximize recovery for reuse or recycling. Consult environmental professional to determine if state or federal regulations would classify spilled or contaminated materials as a hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Comply with all federal, state and local laws pertaining to waste management.

14. TRANSPORT INFORMATION

UN Proper Shipping Name	Petroleum crude oil
UN Hazard Class	3
UN Number	UN1267
UN Packing Group	PGI

15. 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

No chemicals in this product exceed the threshold reporting level established by SARA Title III, Section 313 and 40 CFR 372.

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 material is covered by CERCLA's PETROLEUM EXEMPTION.

(Refer to 40 CFR 307.14)
CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65

PROP 65 WARNING LABEL:
Chemicals known to the State to cause cancer, birth defects, or other reproductive harm are found in gasoline, crude oil, and many other petroleum products and their vapors, or result from their use. Read and follow label directions and use care when handling or using all petroleum products.

WARNING:
This product contains the following chemical(s) listed by the state of California as known to cause cancer or birth defects or other reproductive harm.

MINERAL OILS, UNTREATED [(C)]

Other Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including carbon monoxide, a Prop 65 reproductive toxin.

[(C)] = Carcinogen

16. OTHER INFORMATION

General Comments The information and conclusions herein reflect normal operating conditions and may be from sources other than direct test data on the mixture itself.

Abbreviations:	EQ = Equal	AP = Approximately	N/P = No Applicable Information Found
	LT = Less Than	UK = Unknown	N/AP = Not Applicable
	GT = Greater Than	TR = Trace	N/DA = No Data Available

Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.**

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.**

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

SPILL VOLUME ESTIMATING GUIDANCE

SPILL VOLUME ESTIMATING

The ability to form an early estimate of spill volume is important in determining reporting responsibilities to agencies, determining personnel and equipment requirements, estimating disposal and storage requirements, and activation of the Spill Management Team.

Some rapid methods to estimate spill size are:

For transfer operations:

> Multiply the pumping rate by the elapsed time that the leak was in progress, plus the drainage volume of the line between the two closest valves or isolation points to get the volume loss. The pumping rate and drainage volume should be converted to the same volume units.
>
> Volume loss = Pump Rate (bbls/min or lbs/min) x Elapsed Time (min) + Drainage Volume (bbl or lbs).

For tank overfills:

> Multiplying the pumping rate by the elapsed time to get the volume loss. This volume will be in the units established in the pumping rate and the pumping rate and time elapsed should be converted to the same units.
>
> Volume Loss = Pumping Rate x Time Elapsed

For spills to water:

> Multiply the surface area by the percent coverage and the quantity multiplier. The surface area should be converted to square miles by dividing feet by 5,240 or yards by 1,760 for both length and width. The sheen color will give an approximate film thickness and in turn an approximate quantity multiplier. The multiplier can be found in the table below. This volume will be in gallons as established by the quantity multiplier.

OIL THICKNESS ESTIMATIONS				
Sheen	**Approx. Film Thickness**		**Approx. Quantity of Oil in Film**	
	inches	**mm**	**gallons/mile²**	**liters/km²**
Barely Visible	0.0000015	0.00004	25	44
Silvery	0.000003	0.00008	50	88
Slightly colored	0.000006	0.00015	100	179
Brightly colored	0.000012	0.0003	200	351
Dull	0.00004	0.001	666	1,167
Dark	0.00008	0.002	1,332	2,237

> Volume Loss = Surface Area X Percent Coverage X Quantity Multiplier

For spills to concrete:

Multiply the impacted area's length, width, and depth to get the volume of product in cubic feet. Divide cubic feet by 5.61 to get the volume in barrels. Multiply the cubic feet by 7.48 to get the volume in gallons.

Volume Loss = Length Feet X Width Feet X Depth Feet = Cubic Feet
Cubic Feet / 5.61 = Barrels
Cubic Feet * 7.48 = Gallons

For spills to soil:

Multiply the impacted area's length, width, and depth to get the volume of product in cubic feet. Divide cubic feet by 5.61 to get the volume in barrels. Multiply the cubic feet by 7.48 to get the volume in gallons.

Volume Loss = Length Feet X Width Feet X Depth Feet = Cubic Feet
Cubic Feet / 5.61 = Barrels
Cubic Feet * 7.48 = Gallons

Multiply the Barrels of impacted soil by the soil porosity factor to determine the liquids in the soil if it is 100% saturated. Multiply that number by the saturation percentage factor to get the estimated barrels released.

Soil porosity factors:

- Clay = 10%
- Clay/Sand mix = 15%
- Sand = 20%

Saturation

- Free liquids in the soil = 100% saturation
- No free liquids but liquids run from the soil after squeezing it = 50% saturation
- Soil is damp but liquids cannot be squeezed out = 10%

Volume Loss = (Length Feet X Width Feet X Depth Feet) / 5.61 * Soil Porosity * Saturation

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	N/A (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.	N/A (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...	App D
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	§ 5.2, ICS Forms § 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...	§ 6.7
(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
(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.	§ 6.7
(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,	§ 2.0, 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

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DOT/PHMSA 49 CFR PART 194
CROSS REFERENCE (Cont'd)

§ 194.107	BRIEF DESCRIPTION	LOCATION in PLAN
(c)(1)(vii)	Training procedures,	App D
(c)(1)(viii)	Equipment testing,	App D
(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
(c)(1)(x)	Plan review and update procedures;	§ 1.4
(c)(2)	An appendix for each response zone that includes the information required in paragraph (c)(1)(i)-(ix) of this section and the worst case discharge calculations that are specific to that response zone. An operator submitting a response plan for a single response zone does not need to have a core plan and a response zone appendix. The operator of a single response zone onshore pipeline shall have a single summary in the plan that contains the required information in § 194.113.7; and.	N/A
(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, 2.2
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment.	Fig 1.1
(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.	Fig 1.1
(b)(6)	The type of oil and volume of the worst case discharge.	Fig 1.1

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	Fig 1.1, Fig. 2.2, § 2.0,
(a)(2)	Reporting personnel know --	-----
(a)(2)(I)	The content of the information summary of the response plan.	Fig 1.1
(a)(2)(ii)	The toll-free telephone number of the National Response Center	Fig 2.4, Fig. 2.5
(a)(2)(iii)	The notification process	§ 2.0, Fig. 2.4
(a)(3)	Personnel engaged in response activities know --	-----
(a)(3)(I)	The characteristics and hazards of the oil discharged	§ 3.0
a)(3)(ii)	The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	§ 3.0
(a)(3)(iii)	The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage	§ 3.0
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	§ 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	-----
(b)(1)	Records for operator personnel must be maintained at the operator's headquarters	App D
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	App D
(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

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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...	-----

GLOSSARY OF TERMS / ACRONYMS

PAGE

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This glossary contains definitions of terms that will be used frequently during the course of response operations.

Abandon Pipeline: A pipeline or pipeline segment which has met the criteria of an Out-Of-Service pipeline (purged, sealed and disconnected from an operating system) but will not be maintained to minimum USDOT inspection and maintenance standards.

Activate: The process of mobilizing personnel and/or equipment within the response organization to engage in response operations.

Activator: An individual in the response organization whose responsibilities include notifying other individuals or groups within the organization to mobilize personnel and/or equipment.

Active Pipeline: A pipeline or pipeline segment which is in service whether or not the pipeline is fully operational. This includes pipelines which may have been utilized to transport hazardous liquids but are currently static or unused.

Adverse Weather: The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather - related visibility, and currents within the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Agency Representative: Individual assigned to an incident from an agency who has been delegated full authority to make decisions on all matters affecting that agency's participation in response operations.

Alert: Means an incident has occurred at the terminal which has the potential to affect off-site locations.

Area Committee: As defined by Sections 311(a)(18) and (j)(4) of CWA, as amended by OPA, means the entity appointed by the President consisting of members from Federal, State, and local agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Area Contingency Plan: As defined by Sections 311(a)(19) and (j)(4) of CWA, as amended by OPA, means the plan prepared by an Area Committee, that, in conjunction with the NCP, shall address the removal of a discharge including a worst-case discharge and the mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Average Most Probable Discharge: A discharge of the lesser of 50 barrels or 1% of the volume of the worst case discharge.

Barrel (bbl): Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

Bioremediation Agents: Means microbiological cultures, enzyme additives, or nutrient additives that are deliberately introduced into an oil discharge and that will significantly increase the rate of biodegradation to mitigate the effects of the discharge.

Boom: A piece of equipment or a strategy used to either contain free floating oil to a confined area or protect an uncontaminated area from intrusion by oil.

Booming Strategies: Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.

Breakout Tank: Means a tank used to (a) relieve surges in a hazardous liquid pipeline system or (b) receive and store hazardous liquid transported by a pipeline for reinjection and continued transportation by pipeline.

Bulk: Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

Captain of the Port Zone (COTP): Means a zone specified in 33 CFR Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).

CERCLA: Means the Comprehensive Environmental Response, Compensation Liability Act regarding hazardous substance releases into the environment and the cleanup of inactive hazardous waste disposal sites.

Chemical Agents: Means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the oil pollutant from the water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include solvents.

CHEMTREC: Means the Chemical Transportation Emergency Center operated by Chemical Manufacturers Association. Provides information and/or assistance to emergency responders. Can be reached 24 hours a day by calling 800-424-9300.

Clean-up Contractor: Persons contracted to undertake a response action to clean up a spill.

Cleanup: For the purposes of this document, cleanup refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Cleanup includes restoration of the site and its natural resources.

Coastal Waters: For the purpose of classifying the size of discharges, means the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers.

Coastal Zone: As defined for the purpose of the NCP, means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Coast Guard District Response Group (DRG): As provided for by CWA sections 311(a)(20) and (j)(3), means the entity established by the Secretary of the department in which the USCG is operating within each USCG district and shall consist of: the combined USCG personnel and equipment, including firefighting equipment, of each port within the district; additional prepositioned response equipment; and a district response advisory team.

Command: The act of controlling manpower and equipment resources by virtue of explicit or delegated authority.

Command Post: A site located at a safe distance form the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

Communications Equipment: Equipment that will be utilized during response operations to maintain communication between the Company employees, contractors, Federal/State/Local agencies. (radio/ telephone equipment and links)

Containment Boom: A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

Contingency Plan: (1) A document used by federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; and/or (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

Contract or Other Approved Means: For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization; and/or the facility's own equipment.

Critical Areas to Monitor: Areas which if impacted by spilled oil may result in threats to public safety or health.

Cultural Resources: Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

Damage Assessment: The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

Decontamination: The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.

Discharge: Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants: Means those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion Boom: A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

Drinking Water Supply: As defined by Section 101(7) of CERCLA, means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

Economically Sensitive Areas: Those areas of explicit economic importance to the public that due to their proximity to potential spill sources may require special protection and include, but are not limited to: potable and industrial water intakes; locks and dams; and public and private marinas.

Emergency Planning Zone: Means the area designated by the jurisdiction boundaries of those communities which are within a radial distance of one-half mile from the terminal.

Emergency Response: Means the response to any occurrence which results, or is likely to result, in a release of a hazardous substance due to an event.

Emergency Service: Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.

Emulsion: Suspension of oil in water.

Environmentally Sensitive Areas: Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

Exclusive Economic Zone: Means the zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Facility (DOT): Means new and existing pipe, rights-of-way and any equipment, facility, or building used in the transportation of hazardous liquids or carbon dioxide.

Facility (EPA/USCG): Either an onshore facility or an offshore facility and includes, but is not limited to structures, equipment, and appurtenances thereto, used or capable of being used to transfer oil to or from a vessel or a public vessel. A facility includes federal, state, municipal, and private facilities.

Facility That Could Reasonably Be Expected To Cause Significant and Substantial Harm: Means any fixed MTR on-shore facility (including piping and any structures that are used for the transfer of oil between a vessel and a facility) that is capable of transferring oil, in bulk, to or from a vessel of 250 barrels or more, and a deepwater port. This also includes any facility specifically identified by the COTP.

Facility That Could Reasonably Be Expected To Cause Substantial Harm: Means any mobile MTR facility that is capable of transferring oil to or from a vessel with a capacity of 250 barrels or more. This also includes any facility specifically identified by the COTP.

Facility Operator: The person who owns, operates, or is responsible for the operation of the facility.

Federal Fund: The spill liability trust fund established under OPA.

Federal Regional Response Team (RRT): The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Federal Response Plan (FRP): Means the agreement signed by 25 federal departments and agencies in April 1987 and developed under the authorities of the Earthquake Hazards Reduction Act of 1977 and the Disaster Relief Act of 1974, as amended by the Stafford Disaster Relief Act of 1988.

First Responders, First Response Agency: A public health or safety agency (e.g., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

General Emergency: Means an incident has occurred and the affected community is implementing protective actions.

Handle: To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

Harmful Quantity Of Oil: The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen upon or discoloration of the surface of the water or a shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

Hazardous Chemicals: Means all chemicals which constitute a physical hazard or a health hazard as defined by 29 CFR 1910.1200, with the exceptions listed in section 311(e). This term comprises approximately 90 percent of all chemicals.

Hazardous Material: Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Hazardous Substance: Any substance designated as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act, or discharged by the SERC.

Hazardous Waste: Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.

HAZMAT: Hazardous materials or hazardous substances, exposure to which may result in adverse effects on health or safety of employees.

HAZWOPER: Hazardous Waste Operations and Emergency Response Regulations published by OSHA to cover worker safety and health aspects of

Health Hazard: Means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principals that acute or chronic health effects may occur in exposed employees.

Heat Stress: Dangerous physical condition caused by over exposure to extremely high temperatures.

Hypothermia: Dangerous physical condition caused by over exposure to freezing temperatures.

Incident: Any event that results in a spill or release of oil or hazardous materials. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Briefing Meeting: Held to develop a comprehensive, accurate, and up-to-date understanding of the incident, nature of status of control operations, and nature and status of response operations; ensure the adequacy of control and response operations; begin to organize control and response operations; and prepare for interactions with outside world.

Incident Command Post (ICP): That location at which all primary command functions are executed.

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources at an incident.

Incident Commander (IC): The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Indian Tribe: As defined in OPA section 1001, means any Indian tribe, band, nation, or other organized group or community, but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians and has governmental authority over lands belonging to or controlled by the Tribe.

Initial Cleanup: Remedial action at a site to eliminate acute hazards associated with a spill. An initial clean-up action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of cleanup increases significantly without timely remedial action. All sites must be evaluated to determine whether initial cleanup is total cleanup, however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).

Initial Notification: The process of notifying the necessary Company personnel and Federal/ State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

Initial Response Actions: The immediate actions that are to be taken by the spill observer after detection of a spill.

Inland Area: means the area shoreward of the boundary lines defined in 46 CFR part 7; in the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) as defined in §80.740 through 80.850 of this chapter. The inland area does not include the Great Lakes.

Inland Waters: State waters not considered coastal waters; lakes, rivers, ponds, streams, underground water, et. al.

Inland Zone: Means the environment inland of the coastal zone excluding the Great Lakes, and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Interim Storage Site: A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

Internally Reported Event: An incident that does not meet the reporting criteria established for notification of off-site authorities. No evacuation has occurred.

Lead Agency: The government agency that assumes the lead for directing response activities.

Lead Federal Agency: The agency which coordinates the federal response to incident on navigable waters. The lead federal agencies are:

- **U.S. Coast Guard:** Oil and chemically hazardous materials incidents on navigable waters.
- **Environmental Protection Agency:** Oil and chemically hazardous materials incidents on inland waters.

Lead State Agency: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

Line Section: Means a continuous run of pipe between adjacent pressure pump stations, between a pressure pump station and terminal or breakout tanks, between a pressure pump station and a block valve, or between adjacent block valves.

Light Oil Terminal Operations: Means the storage and distribution of gasoline and diesel fuel to wholesale customers.

Loading: Transfer from Facility to vehicle.

Local Emergency Planning Committee (LEPC): A group of local representatives appointed by the State Emergency Response Commission (SERC) to prepare a comprehensive emergency plan for the local emergency planning district, as required by the Emergency Planning and Community Right-to-Know Act (EPCRA).

Local Response Team: Designated Facility individuals who will fulfill the roles determined in the oil spill response plan in the event of an oil or hazardous substance spill. They will supervise and control all response and clean-up operations.

Lower Explosive Limit: Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

Marinas: Small harbors with docks, services, etc. for pleasure craft.

Marine Transportation Related Facility (MTR FACILITY): Means an on-shore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

Maximum Extent Practicable: Means the planning values derived from the planning criteria used to evaluate the response described in the response plan to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities for a worst case discharge from a facility in adverse weather.

Maximum Most Probable Discharge: Means a discharge of the lesser of 1,200 barrels or 10 percent of the volume of a worst case discharge.

Medium Discharge: Means a discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (85+ Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD.

National Contingency Plan: The plan prepared under the Federal Water Pollution Control Act (33 United State Code §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code § 9601 et seq), as revised from time to time.

National Pollution Funds Center (NPFC): Means the entity established by the Secretary of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). Among the NPFC's duties are: providing appropriate access to the OSLTF for federal agencies and states for removal actions and for federal trustees to initiate the assessment of natural resource damages; providing appropriate access to the OSLTF for claims; and coordinating cost recovery efforts.

National Response System (NRS): Is the mechanism for coordinating response actions by all levels of government in support of the OSC. The NRS is composed of the NRT, RRTs, OSC, Area Committees, and Special Teams and related support entities.

National Strike Force (NSF): Is a special team established by the USCG, including the three USCG Strike Teams, the Public Information Assist Team (PIAT), and the National Strike Force Coordination Center. The NSF is available to assist OSCs in their preparedness and response duties.

National Strike Force Coordination Center (NSFCC): Authorized as the National Response Unit by CWA section 311(a)(23) and (j)(2); the entity established by the Secretary of the Department of Transportation through which the USCG, operating from Elizabeth City, North Carolina, is responsible for administration of the USCG Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

Natural Resource: Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.

Navigable Waters: As defined by 40 CFR 110.1 means the waters of the United States, including the territorial seas. The term includes:

All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

Interstate waters, including interstate wetlands;

All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters;

That are or could be used by interstate or foreign travelers for recreational or other purposes;

From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and

That are used or could be used for industrial purposes by industries in interstate commerce.
All impoundments of waters otherwise defined as navigable waters under this section;

Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and

Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act jurisdiction remains with EPA.

Nearshore Area: For OPA 90, the area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation defined in §80.740 - 80.850 of title 33 of the CFR.

Non-persistent or Group I Oil: A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

1. At lease 50% of which by volume, distill at a temperature of 340 degrees C (645 degrees F);
2. At least 95% of which volume, distill at a temperature of 370 degrees C (700 degrees F).

Ocean: The open ocean, offshore area, and nearshore area as defined in this subpart.

Offshore area: The area up to 38 nautical miles seaward of the outer boundary of the nearshore area.

Oil or Oils: Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302

adopted August 14, 1989, under Section 101(14) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P. L. 99-499.

Oil Spill Liability Trust Fund: Means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

Oil Spill Removal Organization (OSRO): Means an entity that provides response resources.

Oily Waste: Product-contaminated waste resulting from a spill or spill response operations.

On-Scene Coordinator (OSC): Means the federal official predesignated by the EPA or the USCG to coordinate and direct response under subpart D.

On-site: Means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of a response action.

Open Ocean: means the area from 38 nautical miles seaward of the outer boundary of the nearshore area, to the seaward boundary of the exclusive economic zone.

Operating Area: Refers to the rivers and canals, inland, nearshore, Great Lakes, or offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating Environment: Refers to rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

Out of Service (OOS) Pipeline: A pipeline or pipeline segment which has been effectively cleaned of all hazardous liquids, filled with water or inert gas and blinded or otherwise isolated from an active pipeline system.

Owner or Operator: Any person, partnership, corporation, association, governmental unit or public or private organization of any character that owns, operates pipelines, facilities, or is involved in the transportation of oil.

Persistent Oil: A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

1. Group II specific gravity less than .85
2. Group III specific gravity between .85 and less than .95
3. Group IV specific gravity .95 and including 1.0
4. Group V specific gravity greater than 1.0

PHMSA: Pipeline and Hazardous Materials Safety Administration (replaced RSPA)

Pipeline System: Means all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves in transportation, including but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

Plan Holder: The plan holder is the industry transportation related facility for which a response plan is required by federal regulation to be submitted by a vessel or facility's owner or operator.

Post Emergency Response: The phase of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

Primary Response Contractors or Contractors: An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual (QI): That person or entity who has authority to activate a spill cleanup contractor(s), act as liaison with the "On-Scene Coordinator" and obligate funds required to effectuate response activities.

Recreation Areas: Publicly accessible locations where social/sporting events take place.

Regional Response Team (RRT): The Federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for overall planning and preparedness for oil and hazardous materials releases and for providing advice to the OSC in the event of a major or substantial spill.

Remove or Removal: As defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove discharge.

Response Activities: The containment and removal of oil from the water and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to public health or welfare, or the environment.

Response Contractors: Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

Response Guidelines: Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.

Response Plan: A practical manual used by industry for responding to a spill. Its features include: (1) identifying the notifications sequence, responsibilities, response techniques, etc. in a easy to use format; (2) using decision trees, flowcharts, and checklists to ensure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from data required by regulatory agencies to prevent confusion during a spill incident.

Response Priorities: Mechanism used to maximize the effective use of manpower and equipment resources based upon their availability during an operational period.

Response Resources: All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

Responsible Party: Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

Restoration: The actions involved in returning a site to its former condition.

Rivers and Canals: A body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

RSPA: Research and Special Programs Administration (replaced by PHMSA)

Securing the Source: Steps that must be taken to stop discharge of oil at the source of the spill.

Sinking Agents: Means those additives applied to oil discharges to sink floating pollutants below the water surface.

Site Characterization: An evaluation of a cleanup site to determine the appropriate safety and health procedures needed to protect employees from identified hazards.

Site Conditions: Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.

Site Emergency: Means an incident has occurred and the entire terminal, with the exception of critical employees has been sheltered on-site or evacuated.

Site Safety and Health Plan: A site specific plan developed at the time of an incident that addresses:

- Safety and health hazard analysis for each operation.
- Personal protective equipment to be used.
- Training requirements for site workers.
- Medical surveillance requirements.
- Air monitoring requirements.
- Site control measures.
- Decontamination procedures.
- Emergency response procedures.
- Confined space entry procedures.

Site Security and Control: Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.

Skimmers: Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

Snare Boom: Oil will adhere to the material of which this boom is made of and thus collect it.

Sorbents: Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

Spill: An unauthorized discharge of oil or hazardous substance into the waters of the state.

Spill Observer: The first Facility individual who discovers a spill. This individual must function as the first responder and person-in-charge until relieved by an authorized supervisor.

Spill of National Significance (SONS): Means a spill which due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and cleanup the discharge.

Spill Management Team: The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Spill Response: All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications, information gathering and technical advisory phone calls, preparation for and travel to and from spill sites, direction of clean-up activities; damage assessments, report writing, enforcement investigations and actions, cost recovery, and program development.

Spill Response Personnel: Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be pre-approved on a list maintained in each region.

Staging Areas: Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission (SERC): A group of officials appointed by the governor to implement the provisions of Title III of the Federal Superfund Amendments and Re-authorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Substantial Threat of a Discharge: Means any incident or condition involving a facility that may create a risk of discharge of fuel or cargo oil. Such incidents include, but are not limited to storage tank or piping failures, above ground or underground leak, fires, explosions, flooding spills contained within the facility, or other similar occurrences.

Surface Collecting Agents: Means those chemical agents that form a surface film to control the layer thickness of oil.

Surface Washing Agent: Is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergency mechanism and does not involve dispersing or solubilizing the oil into the water column.

Tanker: A self-propelled tank vessel constructed or adapted primarily to carry oil or hazardous material in bulk in the cargo spaces.

Tidal Current Tables: Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

Toxic Substances: Any substances which have the capacity to produce personal injury or illness to man through ingestion, inhalation, or absorption through any body surface.

Trajectory Analysis: Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

Transfer: Any movement of oil to, from, or within a vessel by means of pumping, gravitation, or displacement.

Trustee: Means an official of a federal natural resources management agency designated in subpart G of the NCP or a designated state official or Indian tribe or, in the case of discharges covered by the OPA, a foreign government official, who may pursue claims for damages under section 1006 of the OPA.

Underwriter: An insurer, a surety company, a guarantor, or any other person, other than an owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

Unified Command: The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed-upon objectives.
- Deploy resources to achieve agreed-upon objectives.

Unified or Coordinated Command Meeting: Held to obtain agreement on strategic objectives and response priorities, review tactical strategies, engage in joint planning, integrate response operations, maximize use of resources, and minimize resolve conflicts.

Unusual Event: Means an incident has occurred which is noticeable and dramatic from the Terminal perimeter; however, no outside assistance is required and no evacuation outside the incident scene has occurred.

Volunteers: An individual who donates their services or time without receiving monetary compensation.

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Waste: Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Waters of the U.S. - See Navigable Waters.

Wetlands: Those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds (40 CFR 112.2(y)).

Wildlife Rescue: Efforts made in conjunction with federal and state agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

Worst Case Discharge: The largest foreseeable discharge under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case discharge includes those weather conditions most likely to cause oil discharged from the facility to enter coastal waters.

AC - Area Committee
ACP - Area Contingency Plan
ADAPTS - Air Deliverable Anti-Pollution Transport
AFFF - Aqueous Film Forming Foam
AGT - Any Gross Tonnage (TONS)
AOR - Area of Responsibility
API - American Petroleum Institute
AQI - Alternate Qualified Individual
ARPA - Automatic Radar Plotting Aid
AST - Aboveground Storage Tank
ASTM - American Society for Testing and Materials
AT - Airtight
ATSDR - Agency for Toxic Substances and Disease Registry
AWG - American Wire Gauge
B - Beam
BIA - Bureau of Indian Affairs
BBL - Barrel (Unit of Volume Equal to 42 Gallons)
BLM - Bureau of Land Management
BPD - Barrels Per Day
BPH - Barrels Per Hour
BOD - Biological Oxygen Demand
BOM - Bureau of Mines
C - Degrees Centigrade
C3 - Command, Control, and Communications
C & R - Cargoes and Restriction (List)
CAER - Community Awareness and Emergency Response
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
CCR - California Code of Regulations
CDB - Continuous Discharge Book
CDG - Subcommittee on the Carriage of Dangerous Goods
CEQ - Council on Environmental Quality
CFM - Cubic Feet per Minute
CFR - Code of Federal Regulations
CG or USCG - Coast Guard
CGA - Compressed Gas Association
CH - Cargo Hold
CHEMTREC - Chemical Transportation Emergency Center
CHRIS - Chemical Hazards Response Information System
CMA - Chemical Manufacturers Association
CNG - Compressed Natural Gas
CO - Commanding Officer
COA - Certificate of Adequacy
COC - Certificate of Compliance
COE - U. S. Army Corps of Engineers
COF - Certificate of Fitness
COFR - Certificate of Financial Responsibility
COI - Certificate of Inspection
COIL - Central Oil Identification Laboratory
COMDTINST - Commandant Instruction
COMDTNOTE - Commandant Notice
COMDTPUB - Commandant's Publication
CONUS - Continental United States
COPH - Cargoes of Particular Hazard
CORE - Contingency Response
COTP - Captain of the Port Zone
COW - Crude Oil Washing
CRZ - Contamination Reduction Zone
CS - General Cargo Ship
CSA - Canada Standards Association
CSC - International Convention for Safe Containers, 1972
CT - Cargo Tank
C/V - Container Vessel
CVS - Commercial Vessel Safety Program
CWA - Clean Water Act (Federal - Public Law 100-4)
CWS - Community Water System
CZM - Coastal Zone Management
DECON - Decontamination
DEQ - Department of Environmental Quality
DL - Decision Letters
DOC - Department of Commerce

DOD - Department of Defense
DOE - Department of Energy
DOI - Department of Interior
DOJ - Department of Justice
DOL - Department of Labor
DOS - Department of State
DOSC Deputy On-Scene Coordinator
DOT - Department of Transportation
DSHO - Designated Safety and Health Official
DWT - Deadweight Tons
EBS - Emergency Broadcast System
EEBA - Emergency Escape Breathing Apparatus
EEI - Essential Elements of Information
EERU - Environmental Emergency Response Unit
EG - Emergency Generator Room
EHS - Extremely Hazardous Substance
EIS - Environmental Impact Statement
EMA - Emergency Management Agency
EMS - Emergency Medical Service
EMT - Emergency Medical Technician
EO - Executive Order
EOC - Emergency Operations Center
EOD Explosive Ordinance Disposal
EP - Estimated Position
EPA - U. S. Environmental Protection Agency
EPCRA - The Emergency Planning and Right-to-Know Act of 1986 (Title III of SARA)
EQ - Environmental Quality
ERT - Environmental Response Team
ESA - Endangered Species Act
ESD - Emergency Shutdown
ETA - Estimated Time of Arrival
ETF - Emergency Task Force
FAA - Federal Aviation Administration
FAX - Facsimile Machine
FCC - Federal Communications Commission
FCL - Flammable Cryogenic Liquid
FEMA - Federal Emergency Management Agency
FMC - Federal Maritime Commission
FOIA - Freedom of Information Act
FOIL - Field Oil Identification Laboratory
FOSC - Federal On-Scene Coordinator
FP - Flashpoint
FPN - Federal Project Number
FR - Federal Register
FRDA - Freshwater Resource Damage Assessment
FRF - Federal Revolving Fund
FT - Fuel Tank
FTJ - Failure to Join
FWPCA - Federal Water Pollution Control Act (as amended) (33 U.S.C. 1251 et seq.)
GIS - Geographic Information System
GMT - Greenwich Mean Time
GPM - Gallons Per Minute
GSA - General Services Administration
GT - Gross Tons
HAZMAT - Hazardous Materials
HAZWOPER - Hazardous Waste Operations and Emergency Response
HHS - Department of Health and Human Services
HP - High Pressure
IC - Incident Commander
ICS - Incident Command System
IDLH - Immediately Dangerous to Life - or Health
IG - Inert Gas
IGS - Inert Gas System
IOPP - International Oil Pollution Prevention Convention
IS - Intrinsically Safe
JRT - Joint Response Team
KW - Kilowatt
LEL - Lower Explosive Limit
LEPC - Local Emergency Planning Committee
LFL - Lower Flammable Limit
LNG - Liquefied Natural Gas
LOA - Length Overall
LOC - Letter of Compliance
LOP - Line of Position
LOSC - Local On-Scene Coordinator
LOX - Liquefied Oxygen

LP - Low Pressure
LPG - Liquefied Petroleum Gas
LRT - Local Response Team
MAWP - Maximum Allowable Working Pressure
MBL - Mobile
MEP - Marine Environmental Protection
MOU - Memorandum of Understanding
MSDS - Material Safety Data Sheet
MSO - Marine Safety Office
MSU - Marine Safety Unit
N/A - Not Applicable
NC - Not Certified
NCP - National Contingency Plan
NCWS - Non-Community Water System
NEPA - National Environmental Policy Act
NIIMS - National Interagency Incident Management System
NIOSH - National Institute for Occupational Safety and Health
NLS - Noxious Liquid Substances
NM - Nautical Mile
NMFS - National Marine Fisheries Service
NMT - Not More Than
NOAA - National Oceanic and Atmospheric Administration (Department of Commerce)
NPDES - National Pollution Discharge Elimination System
NPFC - National Pollution Funds Center
NPRM - Notice of Proposed Rulemaking
NPS - National Park Service
NRC - National Response Center
NRDA - Natural Resource Damage Assessment
NRS - National Response System
NRT - National Response Team
NSF - National Strike Force
NSFCC - National Strike Force Coordination Center
NTNCWS - Non -Transient Non-Community Water System
OPA - Oil Pollution Act
OPS - Office of Pipeline Safety (DOT)
ORB - Oil Record Book
OSC - On-Scene Coordinator
OSHA - Occupational Safety and Health Administration (USDL)
OSLTF - Oil Spill Liability Trust Fund
OSPRA - Oil Spill Prevention and Response Act
OSRL - Oil Spill Response Limited
OSRO - Oil Spill Response Organization
OT - Oil Tight
OVA - Organic Vapor Analyzer
OWS - Oily Water Separator
PCB - Polychlorinated Biphenyls
PFD - Personal Flotation Device
PGR - Pager
PHMSA - Pipeline and Hazardous Materials Safety Administration
PIAT - Public Information Assist Team
POLREP - Pollution Report
PPE - Personal Protective Equipment
PPM - Parts Per Million
PSD - Prevention of Significant Deterioration
QDC - Quick Disconnect Coupling
QI - Qualified Individual
RACT - Reasonably Achievable Control Technology
RCP - Regional Contingency Plan
RCRA - Resource Conservation and Recovery Act
RECON - Reconnaissance
RQ - Reportable Quantity
RSPA - Research and Special Programs Administration (DOT - OPS)
SARA - Superfund Amendments and Reauthorization Act
SCBA - Self Contained Breathing Apparatus
SDWA - Safe Drinking Water Act
SERC - State Emergency Response Commission
SI - Surface Impoundment
SIC - Standard Industrial Classification
SKIM - Spill Cleanup Equipment Inventory
SMT - Spill Management Team
SONS - Spill of National Significance
SOP - Standard Operating Procedure

SPCC - Spill Prevention Control and Countermeasures
SSC - Scientific Support Coordinator (NOAA)
STEL - Short Term Exposure Limits
SUPSALV - United States Navy Supervisor of Salvage
SWD - Salt Water Disposal
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TSDF - Treatment, Storage or Disposal Facility
UCS - Unified Command System
U.S. - United States
USACOE - U.S. Army Corps of Engineers
U.S.C. - United States Code
USCG - U.S. Coast Guard
USDA - U.S. Department of Agriculture
USDL - U.S. Department of Labor
USDOD - U.S. Department of Defense
USDOE - U.S. Department of Energy
USDW - Underground Source of Drinking Water
USFWS - U. S. Fish and Wildlife Services
USGS - U. S. Geological Survey
USPCI - United States Pollution Control, Incorporated
UST - Underground Storage Tank
WCD - Worst Case Discharge
WT - Water Tight

REGULATORY AGENCY CORRESPONDENCE AND OTHER AGENCY REQUIREMENTS