



Texas Zone
Facility Response Plan



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Developed by:



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



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Facility Response Plan**

Developed by:



TECHNICAL RESPONSE PLANNING
CORPORATION

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Response Procedures Flow Chart

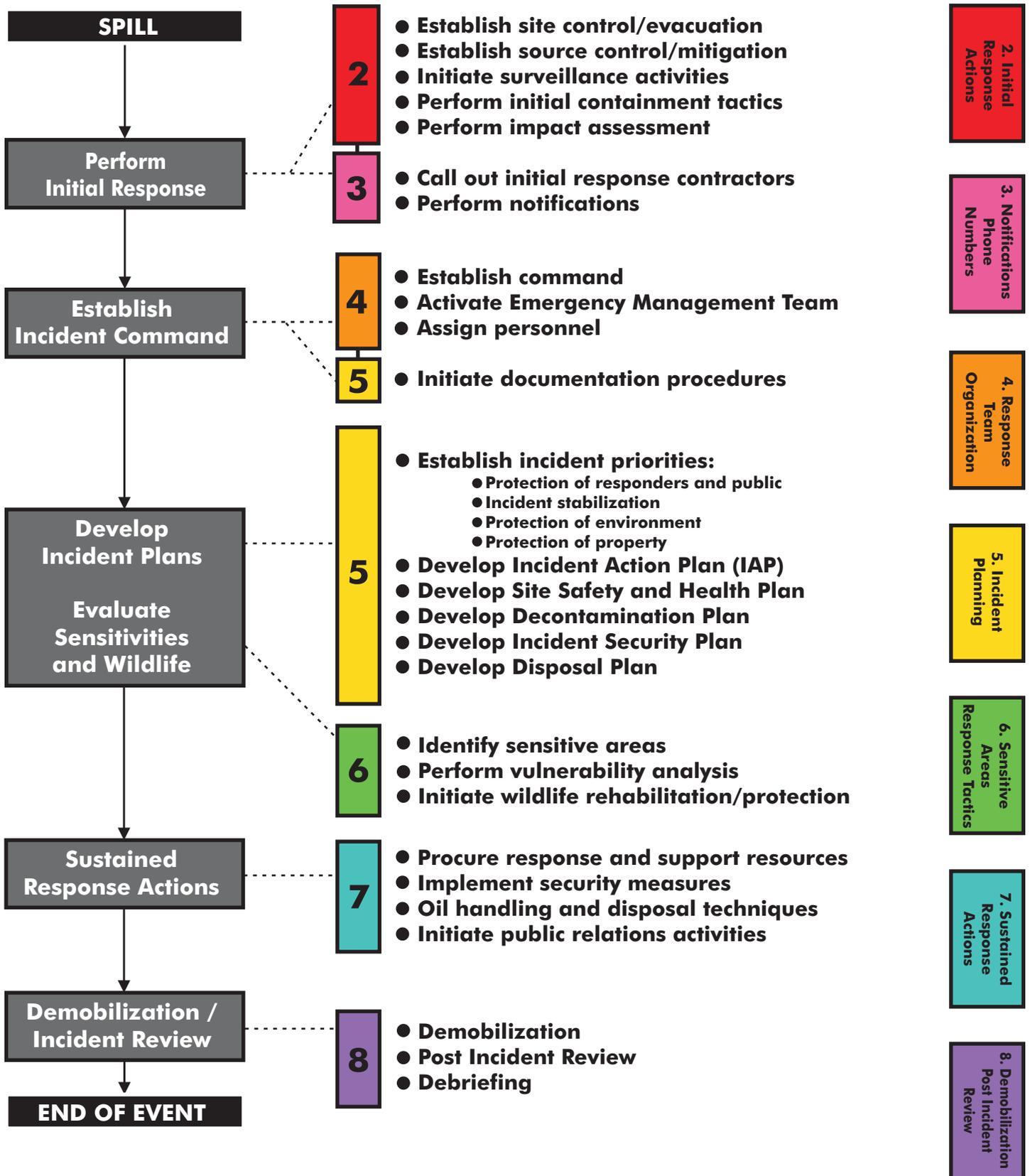


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SECTION 1

INTRODUCTION

Last revised: July 2011

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[Figure 1-2 - Texas Zone Information Summary](#)

[Figure 1-3 - System Pipeline Overview Map](#)

[Figure 1-4 - Texas Zone Zone Map](#)

[1.1 Purpose / Scope of Plan](#)

[1.2 Plan Review and Update Procedure](#)

[1.3 Certification of Adequate Resources](#)

[1.4 Agency Submittal / Approval Letters](#)

FIGURE 1-1 - DISTRIBUTION LIST

PLAN HOLDER	ADDRESS	NUMBER OF COPIES		DISTRIBUTION DATE
		PAPER	ELECTRONIC	
Blueknight Energy Partners	6501 South CR 1110 Midland, TX 79706	0	1	
Blueknight Energy Partners	6120 South Yale Ave, Suite 500 Tulsa, OK 74136	0	1	
BKEP Pipeline, LLC, Longview Regional Office	1501 S. Martin Luther King Jr. Blvd. Longview, TX 75602	0	1	
BKEP Crude, LLC	10750 McClary Dumas, TX 79029	0	1	
Response Plans Officer - Pipeline and Hazardous Material Safety - U.S. Department of Transportation	1200 New Jersey Ave. SE., Room E22-210 Washington, D.C. 20590	0	2	

* This Plan is maintained on the TRP Web-based System. Each Field Office, Operations Manager, and key Response Personnel has anytime access to the plan online.

FIGURE 1-2 - TEXAS ZONE INFORMATION SUMMARY

Owner/Operator:	Blueknight Energy Partners, LP 6210 South Yale Ave. Suite 500 Tulsa, OK 74136	
Zone Name:	Texas Zone	
Zone Mailing Address:	6210 South Yale Ave. Suite 500 Tulsa, OK 74136	
Zone Telephone/Fax:	(855) 999-2537 ? Pipeline Control Center (24-hr), (918) 237-4000 office / (918) 237-4001	
Qualified Individuals:	Facility Response Team	
		Work
	Pat Wisdom Operations Manager Designated Individual (903) 758-5892 (Office) (903) 475-3407 (Mobile)	1501 S. Martin Luther King Blvd. Longview, TX 75602

	Shane Weems Alternate Qualified Individual (903) 758-5892 (Office) (903) 576-4095 (Mobile)	1501 S. Martin Luther King Blvd. Longview, TX 75602
	Shane Millet Alternate Qualified Individual (903) 261-3476 (Office) (903) 261-3476 (Mobile)	1100 Louisiana St Ste 5500 Houston, TX 77002
	Emergency Response Personnel	
	Work	

FIGURE 1-2 - TEXAS ZONE INFORMATION SUMMARY

Qualified Individuals:	Facility Response Team	
		Work
	Jimmy Woods Operations Supervisor Qualified Individual (806) 934-7518 (Office) (Home) (806) 717-8090 (Mobile)	723 N. Birge, PO Box 1356 Dumas, TX 79029
	Ray Cecil Maintenance Supervisor Alternate Qualified Individual (806) 934-7510, (806) 935-7799 (Office) (b) (6) (806) 681-5820, (806) 930-6125 (Mobile)	723 N. Brige, P.O. Box 1356 Dumas, TX 79029
	Jerry Potter Health & Safety Coordinator Alternate Qualified Individual (806) 935-6385 (Office) (Home) (806) 886-1151 (Mobile)	10750 McClary Dumas, TX 79029
	Frank DeLao Operations Manager Qualified Individual (432) 684-4302 (Office) (Home) (432) 301-3724 (Mobile)	6501 South CR 1110 Midland, TX 79706
	Emergency Response Personnel	
Work		

FIGURE 1-2 - TEXAS ZONE INFORMATION SUMMARY, CONTINUED

Line Sections/ Products Handled: (Refer to Product Characteristic and Hazards, FIGURE C.6-1)	SECTION	PRODUCTS
	Houston Area - Pierce Jct. (Friendswood) - Webster 8", Mile Pipe/Mile Row 3.37	Crude Oil
Houston Area - Pierce Jct. (Friendswood) - Webster 8", Mile Pipe/Mile Row 5.92	Crude Oil	
Houston Area - Pierce Jct. (Friendswood) - Webster 8", Mile Pipe/ Mile Row 10.52	Crude Oil	
Houston Area - Thompson-Sugarland 6", 8", Mile Pipe/ Mile Row 7.2	Crude Oil	
Longview Area - Sand Flat - Hawkins 6", 8" Mile Pipe/ Mile row 10.9, Largest Segment 5.87 miles (6")	Crude Oil	
Longview Area - Gladewater ? Longview 8", 10", 18" Mile Pipe/Mile Row 7.7, Largest Segment 3.91 miles (8")	Crude Oil	
Longview Area - Talco-Longview 8", Mile Pipe/ Mile Row 63.5, Largest Segment 16.84 miles	Crude Oil	
Longview Area - Pittsburg to Shell-Kilgore 6", 8" Mile Pipe/Mile Row 14.2, Largest Segment 16.05 miles (8")	Crude Oil	
Longview Area - Neches Junction - Arp 8" Mile Pipe/Mile Row 35.6/35.9, Largest Segment 8.86 miles	Crude Oil	
Longview Area - Bullard-Jet On Arp/Groesbeck Mile Pipe/Mile Row 9.2, Largest segment 9.19	Crude Oil	
Longview Area - Arp-Bateman 8" Mile Pipe/Mile Row 13.9, Largest Segment 4.28 miles	Crude Oil	
Longview Area - Bateman-Longview 8" Mile Pipe/Mile row 19.1/12.9, Largest Segment 6.29 miles	Crude Oil	
Masterson Area - Pioneer Natural Resources, Tank Battery#4, 600 ft, 2"	Crude Oil	
Masterson Area - Pioneer Natural Resources, Tank Battery #3, 200 ft, 2"	Crude Oil	
Masterson Area - Pioneer Natural Resources, Tank Battery #2, 600 ft, 2"	Crude Oil	
Masterson Area - 7000' of 3"	natural gas liquids/condensate	
Midland Area - Midland Station to Centurion Pipeline 12? , 10.5 Miles	Crude Oil	

FIGURE 1-2 - TEXAS ZONE INFORMATION SUMMARY, CONTINUED

Description of Zone:	<p>The pipeline carries Crude Oil , Condensate in the areas shown in FIGURE 1-4 and FIGURE 1-5.</p> <p>The Texas Pipeline Zone can be split into four areas based on geographic location for ease of discussion.</p> <p>The Houston Area includes 2 pipeline sections and 4 gathering sections with the potential to cause "significant and substantial environmental harm". All of these pipeline sections are dedicated to the transportation of crude oil and oil distillates. There are approximately 400 miles of pipelines ranging from 4 to 8 inches in diameter.</p> <p>The Longview Area consists of 19 pipeline sections and 3 gathering systems with the potential to "cause significant and substantial environmental harm". These are approximately 565 miles of pipeline transport crude oil and distillates that range from 2 to 10 inches in diameter.</p> <p>The Masterson Area consists of 32 mile of pipeline sections ranging in size from 2" to 4" in diameter, and transporting NGLs and natural gas condensate.</p> <p>The Midland Area consists of 10.5 mile of pipeline sections approximately 12? in diameter, and transporting crude oil.</p>
PHMSA Approval#:	
Response Zone Consists of the Following Counties:	Houston Area: Brazoria, Fort Bend, Galveston and Harris. Longview Area: Anderson, Camp, Cherokee, Franklin, Gregg, Rusk, Smith, Titus, Upshur, Wood. Masterson Area: Potter, Moore. Midland Area: Midland
Alignment Maps (Piping, Plan Profiles):	Maintained at: Blueknight Energy Partners, 2872 N. Ridge Road, Suite 102C, Wichita, KS 67205
Worst Case Discharge:	(b) (7)(F)
Spill Detection and Mitigation Procedures:	Refer to SECTION 2 and APPENDIX C .
Statement of Significant and Substantial Harm:	The descriptive areas in this system all contain pipelines greater than 6 5/8 inches in diameter and longer than ten miles. At least one section of pipeline in each area crosses a major waterway or comes within five miles of a public drinking water intake. Therefore, in accordance with 49 CFR 194.103(c), the overall

	response zone described in this Plan will be treated as if expected to cause significant and substantial harm.
Date Prepared:	

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

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

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FIGURE 1-3 - SYSTEM OVERVIEW MAP

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FIGURE 1-4 - TEXAS ZONE MAP

Click here to view - [Texas Zone Map 10/17/2012](#)

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1.1 PURPOSE / SCOPE OF PLAN

The purpose of this Spill Response Plan (Plan) is to provide guidelines to quickly, safely, and effectively respond to a spill. The pipeline is owned and operated by Blueknight Energy Partners, LP, herein referred to as "Company."

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

- Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 plan (49 CFR 194)
- Occupational Safety and Health Administration (OSHA) requirements for emergency response plans (EAP and ERP) (29 CFR 1910)

1.2 PLAN REVIEW AND UPDATE PROCEDURE

In accordance with 49 CFR Part 194.121, this Plan will be reviewed annually and modified to address new or different operating conditions or information included in the Plan. Upon review of the response plan for each five-year period, revisions will be submitted to PHMSA provided the changes to the current plan are needed, or a letter stating that the plan is still current. Company internal policy states that the Plan will be reviewed at least annually and modified as appropriate. In the event the Company experiences a Worst Case Discharge, the effectiveness of the plan will be evaluated and updated as necessary. If a new or different operating condition or information would substantially effect the implementation of the Plan, the Company will modify the Plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA.

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

CONDITIONS REQUIRING REVISIONS AND SUBMISSIONS
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 the transportation system in a way that substantially effects the information included in the Plan, such as a change to the Worst Case Discharge volume.
A change in the type of oil handled, stored, or transferred that materially alters the required response resources.
A change in the name of the Oil Spill Removal Organization (OSRO).
A change in the emergency response procedures.
A change in key personnel (Qualified Individuals).
A change in the NCP or ACP that has significant impact on the equipment appropriate for response activities.
Any other changes that materially affect full implementation of the Plan.

All requests for changes must be made through the Facility Manager and will be submitted to PHMSA by a Environmental Department and the Health and Safety Department Representative.

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

1.3 CERTIFICATION OF ADEQUATE RESOURCES

CERTIFICATION

Pursuant to the Clean Water Act Section 311(j)(5)(F)

Blueknight Energy Partners, LP

Blueknight Energy Partners, LP hereby certifies to the Pipeline Hazardous Material Safety Administration of the Department of Transportation that they have obtained, through contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge.



Pat Wisdom
Operations Manager & QI

1.4 AGENCY SUBMITTAL / APPROVAL LETTERS

No Agency Submittal / Approval Letters Uploaded.

SECTION 2

INITIAL RESPONSE ACTIONS

Last revised: July 2011

2.1 Spill Response

Figure 2.1-1 - Spill Response Action Checklist

2.1.1 Spill Detection and Mitigation Procedures

Figure 2.1-2 - Spill Mitigation Procedures

2.1.2 Spill Surveillance Guidelines

Figure 2.1-3 - Spill Surveillance Checklist

2.1.3 Spill Volume Estimating

Figure 2.1-4 - Spill Estimation Factors

2.1.4 Estimating Spill Trajectories

2.1.5 Initial Containment Actions

2.1.6 Safety Considerations

2.2 Evacuation

2.3 Tornado

2.4 Hurricane (If Applicable)

2.5 Flood

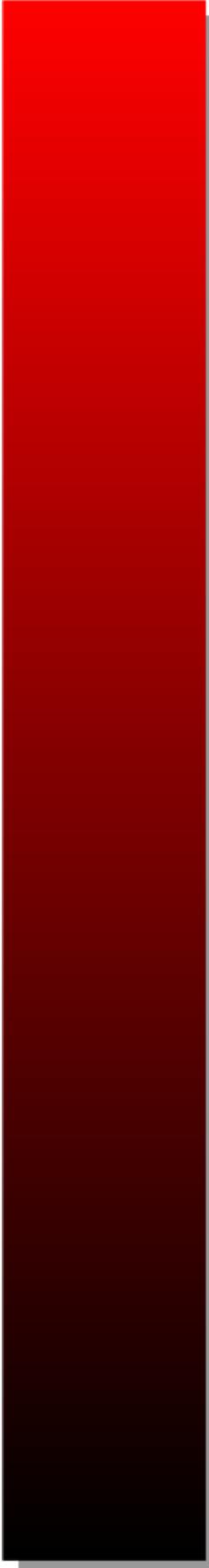
2.6 Medical

(b) (7)(F)

2.8 Hydrogen Sulfide (H₂S) Release

Figure 2.8-1 - Hydrogen Sulfide Effects

Figure 2.8-2 - Hydrogen Sulfide Initial Response Action Checklist



SECTION 2
INITIAL RESPONSE ACTIONS, CONTINUED

2.9 Fire and/or Explosion

2.9.1 Storage Tank Seal Area Fire

2.9.2 Storage Tank Full Surface Fire

2.9.3 Dike Area, Piping or Manifold Fire

2.9.4 Vent Fires (Cone Roof Tanks with no Floating Roof)

2.9.5 Vapor Releases

2.9.6 Loading Rack Fires (Loading/Unloading Areas)

2.1 SPILL RESPONSE

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST

RESPONSE ACTION	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
DOCUMENT ALL ACTIONS TAKEN		
First Person to Discover Spill		
Immediately notify Operations Control Center and Qualified Individual or posted emergency contacts. Take appropriate action to protect life and ensure safety of personnel.		
Immediately shutdown operations (if applicable). Remotely controlled motor operated valves will be closed by the Operations Center as soon as a leak is detected.		
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.		
Qualified Individual		
Assume role of Incident Commander until relieved.		
Conduct preliminary assessment of health and safety hazards.		
Evacuate non-essential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary).		
Make appropriate regulatory notifications (FIGURE 3.1-3). <ul style="list-style-type: none"> • National Response Center • Appropriate State Agency 		
Call out spill response contractors (FIGURE 3.1-3).		
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, etc.		
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 flammable vapor concentrations are within safe atmosphere before sending personnel into the spill area.		
If safe to do so, direct responders to stabilize and		

contain the situation. This may include berming or deployment of containment and/or sorbent boom.		
If applicable, for low flash oil (<100°F); consider applying foam over the oil, using water spray to reduce vapors, grounding all equipment handling the oil, and using non-sparking tools.		
If there is a potential to impact shorelines, consider lining shoreline with sorbent or diversion boom to reduce impact.		
Notify Local Emergency Responders.		
Obtain the information necessary to complete the Oil Spill Report Form (FIGURE 3.1-2) and phone this information to the Environmental Department and the Health and Safety Department Manager.		

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST, CONTINUED

RESPONSE ACTION	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
DOCUMENT ALL ACTIONS TAKEN		
On-Scene Coordinator		
Activate all or a portion of Incident Management Team (IMT) (as necessary). Liaison Officer will maintain contact with notified regulatory agencies.		
Ensure the IMT has mobilized spill response contractors (if necessary). It is much better to demobilize equipment and personnel, if not needed, than to delay contacting them if they are needed.		
Document all response actions taken, including notifications, agency/media meetings, equipment and personnel mobilization and deployment, and area impacted. (Refer to SECTION 5 for documentation.)		
Water based Spills: Initiate spill tracking and surveillance operations. Determine extent of pollution via surveillance aircraft or vehicle. Estimate volume of spill utilizing information in SECTION 2.1.3 . Send photographer / videographer if safe.		
Land based Spills: Initiate spill tracking and surveillance if applicable.		
SECONDARY RESPONSE ACTIONS (Refer to IMT job descriptions in SECTION 4.5)		

FACILITY SPECIFIC RESPONSE CONSIDERATIONS(Refer to **SECTION 6** for maps, tactical plans, and sensitivity information).**2.1.1 Spill Detection and Mitigation Procedures**See **APPENDIX C.1** for spill detection protocols.

Each spill mitigation situation is unique and must be treated according to the circumstance present. In every situation, however, personnel safety must be assessed as the first priority. The potential for ignition and/or toxic exposure must be promptly evaluated. Spill mitigation procedures are listed in **FIGURE 2.1-1**. Discharge volume calculations are provided in **APPENDIX C**.

FIGURE 2.1-2 - SPILL MITIGATION PROCEDURES

TYPE	MITIGATION PROCEDURE
Failure of Transfer Equipment	<ol style="list-style-type: none"> 1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Terminate transfer operations and close block valves. 3. Drain product into containment areas if possible. 4. Eliminate sources of vapor cloud ignition by shutting down all engines and motors.
Tank Overfill/Failure	<ol style="list-style-type: none"> 1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Shut down or divert source of incoming flow to tank. 3. Transfer fluid to another tank with adequate storage capacity (if possible). 4. Shut down source of vapor cloud ignition by shutting down all engines and motors. 5. Ensure that dike discharge valves are closed. 6. Monitor diked containment area for leaks and potential capacity limitations. 7. Begin transferring spilled product to another tank as soon as possible.
Piping Rupture/Leak (under pressure and no pressure)	<ol style="list-style-type: none"> 1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Shut down pumps. Close the closest block valves on each side of the rupture. 3. Drain the line back into contained areas (if possible). Alert nearby personnel of potential safety hazards. 4. Shut down source of vapor cloud ignition by shutting down all engines and motors. 5. If piping is leaking and under pressure, then relieve pressure by draining into a containment area or back to a tank (if possible). Then repair line according to established

	procedures.
Fire/Explosion	<ol style="list-style-type: none"> 1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at risk of injury. 2. Notify local fire and police departments. 3. Attempt to extinguish fire if it is in incipient (early) stage and if it can be done safely. 4. Shut down transfer or pumping operation. Attempt to divert or stop flow of product to the hazardous area (if it can be done safely). 5. Eliminate sources of vapor cloud ignition shutting down all engines and motors. 6. Control fire before taking steps to contain spill. <p>Also refer to fire/explosion response procedures in <u>SECTION 2.9</u>.</p>
Manifold Failure	<ol style="list-style-type: none"> 1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Terminate transfer operations immediately. 3. Isolate the damaged area by closing block valves on both sides of the leak/rupture. 4. Shut down source of vapor cloud ignition by shutting down all engines and motors. 5. Drain fluids back into containment areas (if possible).

2.1.2 Spill Surveillance Guidelines

- Surveillance of an oil spill should begin as soon as possible following discovery to enable response personnel to assess spill size, movement, and potential impact locations
- All surveillance should be done up wind of spill
- Dispatch observers to crossings downstream or down gradient to determine the spills maximum reach
- Clouds, shadows, sediment, floating organic matter, submerged sand banks or wind-induced patterns on the water may resemble an oil slick if viewed from a distance
- Sorbent pads may be used to detect oil on water
- Use surface vessels to confirm the presence of any suspected oil slicks (if safe to do so); consider directing the vessels and photographing the vessels from the air, the latter to show their position and size relative to the slick
- For large bodies of water, it is difficult to adequately observe oil on the water surface from a boat, dock, or shoreline

- Spill surveillance is best accomplished through the use of helicopters or small planes; helicopters are preferred due to their superior visibility and maneuverability
- If fixed-wing planes are to be used, high-wing types provide better visibility than low-wing types
- All observations should be documented in writing and with photographs and/or videotapes
- Describe the approximate dimensions of the oil slick based on available reference points (i.e. vessel, shoreline features, facilities); use the aircraft or vessel to traverse the length and width of the slick while timing each pass; calculate the approximate size and area of the slick by multiplying speed and time
- Record aerial observations on detailed maps, such as topographic maps
- In the event of reduced visibility, such as dense fog or cloud cover, boats may have to be used to patrol the area and document the location and movements of the spill; however, this method may not be safe if the spill involves a highly flammable product
- Surveillance is also required during spill response operations to gauge the effectiveness of response operations; to assist in locating skimmers; and assess the spill's size, movement, and impact
- An Spill Surveillance Checklist is provided in **FIGURE 2.1-3**

FIGURE 2.1-3 - SPILL SURVEILLANCE CHECKLIST

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

General Information	
Date:	Tidal or river stage (flood, ebb, slack, low water):
Time:	On-scene weather (wind, sea state, visibility):
Incident name:	Platform (helicopter, fixed-wing aircraft, boat, shore):
Observer's name:	Flight path/trackline:
Observer's affiliation:	Altitude where observation taken:
Location of source (if known):	Areas not observed (i.e. foggy locations, restricted air spaces, shallow water areas):
Oil Observations	

Slick location(s):	Color and appearance (i.e. rainbow, dull or silver sheen, black or brown in color or mousse):
Slick dimensions:	Percent coverage:
Orientation of slick(s):	Is oil recoverable (Y/N)?:
Distribution of oil (i.e. windrows, streamers, pancakes or patches):	
Considerations	
<ul style="list-style-type: none"> • During surveillance, travel beyond known impacted areas to check for additional oil spill sites • Include the name and phone number of the person making the observations • Clearly describe the locations where oil is observed and the areas where no oil has been seen 	
Other Observations	
Response Operations	
Equipment deployment (general locations where equipment is working and whether they are working in the heaviest concentration of oil):	
Boom deployment (general locations of boom, whether the boom contains oil, and whether the oil entrains under the boom):	

FIGURE 2.1-3 - SPILL SURVEILLANCE CHECKLIST, CONTINUED

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

Environmental Observations

Locations of convergence lines, terrain, and sediment plumes:

--

Locations of debris and other features that could be mistaken for oil:

Wildlife present in area (locations and approximate numbers):

Spill Sketch

2.1.3 Spill Volume Estimating

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

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

Some rapid methods to estimate spill size are:

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

FIGURE 2.1-4 - SPILL ESTIMATION FACTORS

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

NOAA, 09/2000

2.1.4 Estimating Spill Trajectories

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

For spills to large bodies of water, oil spill trajectories can be estimated using vector addition or with computer programs. Hand calculations typically utilize the following assumptions:

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

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

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

2.1.5 Initial Containment Actions

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

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

Selection of the appropriate location and method will depend upon:

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

2.1.6 Safety Considerations

- Containment actions should not be conducted during inclement weather or unsafe conditions such as high winds, fast currents, or unstable terrain
- Eliminate all ignition sources
- Avoid contact with the spilled product

- Use respiratory protection (if applicable)
- Ensure that the area remains secure to air traffic

2.2 EVACUATION

EVACUATION CHECKLIST	
TASK	INITIALS
Assemble personnel at predetermined safe location: upwind/up gradient of release (assembly area).	
If evacuation of surrounding area is necessary, request assistance from local emergency responders (i.e. Fire Department); provide location of the incident and the Command Post.	
Account for Company and contractor personnel.	
Assess casualties (number/type/location).	
Determine probable location of missing personnel.	
Secure site, establish re-entry point and check-in/check-out procedures.	
Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.).	
Monitor situation (weather, vapors, product migration) for significant changes.	
Assist in developing a Rescue Plan if necessary.	

2.3 TORNADO

TORNADO CHECKLIST	
TASK	INITIALS
Monitor news media and weather station reports (FIGURE 3.1-3). <ul style="list-style-type: none"> • Tornado watch means conditions are favorable for tornadoes. • Tornado warning means a tornado has been sighted. 	
When a tornado warning is issued, sound the local alarm.	
Take shelter: <ul style="list-style-type: none"> • Go to an interior room on the lowest floor. • Get under a sturdy piece of furniture. 	

<p>Use your arms to protect head and neck.</p> <ul style="list-style-type: none"> • For stations without an adequate storm shelter, immediately evacuate if a tornado watch is initiated (if safe to do so). • If caught outdoors during a tornado, take shelter by lying flat in a low lying area away from trees and other structures. Do NOT stay in vehicle. 	
Have location personnel report to the designated area.	
Account for all personnel on duty.	
Look for funnel formations on the ground or in the clouds; listen for a roar that sounds like a jet aircraft or rail traffic.	
If the facility is damaged by the tornado, notify Management.	
<p>Go to the scene of the incident to evaluate the situation.</p> <ul style="list-style-type: none"> • Be aware of broken glass and downed power lines. • Check for injuries • Use caution entering a damaged building. 	
Update Supervisory Personnel/Management.	
Perform Spill Response Actions functions as stated in FIGURE 2.1-1 .	
Conduct post-emergency evaluation and report.	

2.4 HURRICANE (IF APPLICABLE)

HURRICANE CHECKLIST	
Prior to Hurricane Season	INITIALS
1. Conduct hurricane awareness training, which includes evacuation routes and asset hurricane procedures.	
2. Coordinate activities with local and state agencies involved in hurricane preparation (Emergency Access Cards, etc.).	
3. Communicate recommended Community Evacuation routes.	
4. Determine disposition of company vehicles during evacuation.	
5. Each location should maintain current photographs of facilities.	

June 1 - Beginning of Hurricane Season	
1. Verify the availability of and procure emergency supplies, as necessary: <ul style="list-style-type: none"> • Portable Radios • Plywood, lumber, plastic sheeting or covering • Drinking water • First Aid Kits • Flashlight & batteries • Tools • Emergency non-perishable food item 	
2. Ensure emergency generators and portable equipment is in good working order and sufficient fuel is available.	
Hurricane entering Gulf of Mexico/Atlantic Ocean	
1. Implement hurricane procedures.	
2. Identify employees who may volunteer to implement hurricane procedures.	
72 hours prior to hurricane's eye reaching landfall	
1. Cancel all training and meetings requiring travel to affected areas.	
2. Designate location for temporary Communication Center.	
3. Verify contractor contacts and availability.	
4. All employees shall provide to their supervisor an evacuation location and contact number.	
5. Each location shall identify a radio frequency which broadcasts emergency weather information.	
6. Report facility status to Corporate Management.	

2.4 HURRICANE (IF APPLICABLE), CONTINUED

SPECIFIC RESPONSE ACTIONS	COMMENT
48 hours prior to hurricane's eye reaching landfall	
1. Implement flex-shift to allow employees to secure	

personal property.	
2. Ensure all storage tanks are stabilized at a minimum of 40% capacity.	
3. Ensure all below ground sumps have been pumped dry.	
4. Secure all critical documents including electronic data.	
5. Elevate electrical equipment, sensitive office equipment and documents in the event of high water.	
6. Report facility status to Management.	
36 hours prior to hurricane's eye reaching landfall	
1. Communicate with suppliers and affected customers.	
2. Report facility status to Management.	
24 hours prior to hurricane's eye reaching landfall	
1. Begin shutdown operations.	
2. Release non-essential personnel.	
3. Report facility status to Corporate Management.	
12 hours prior to hurricane's eye reaching landfall	
1. Man Communications Center continuously.	
2. Report facility status to Management.	
Post Storm Recovery Procedure	
1. Initiate facility damage assessment.	
2. Report facility status to Management.	
3. Once access has been granted, the following processes should be surveyed for operational reliability prior to startup: <ul style="list-style-type: none"> • Electrical panels and motors • Instrument air system • Emergency shutdown system • Tank and vessel foundation and support (possible washouts) 	

- Check for dangerous wildlife and reptiles

2.5 FLOOD

FLOOD CHECKLIST	
TASK	INITIALS
Perform continuous monitoring of the situation by listening to radio and/or television reports (FIGURE 3.1-3).	
<ul style="list-style-type: none"> • Flash flood watch means flooding is possible. • Flash flood warning means flooding is occurring or is imminent. 	
Update Supervisory Personnel when flooding is imminent.	
Establish an evacuation plan (SECTION 2.3).	
Take preliminary actions to secure the facility before flooding and mandatory evacuation.	
Consider having sandbags brought to sites that could be affected by the flooding.	
Consider obtaining portable pumps and hoses from local suppliers or from other petroleum service locations in the area.	
Remove product from underground storage tanks (i.e., sumps and separators, if applicable) and replace with water to prevent them from floating out of the ground.	
Maintain product in tanks above anticipated flood level to prevent tanks from floating.	
Plug all rack drains and facility drains connected to the sump.	
Empty all dikes of water.	
Ensure that tank roof drains are working properly.	
Anchor or remove all bulk additive tanks, fuel barrels, empty drums, and propane tanks (if applicable).	
Notify Supervisory Personnel/Management that the facility will be closed.	
Back up computer files.	
Remove assets such as files, computers, spare parts, and vehicles.	
Shut off high voltage power and natural gas lines.	
Close all valves on product and additive storage tanks.	
Before evacuation, know where all the employees will be residing and obtain phone numbers so they can be contacted if additional emergencies occur.	
Conduct a post-emergency evacuation and report.	

Maintain hazards awareness:

- Structural damage
- Downed power lines
- Leaking natural gas, water, and sewer lines
- Poisonous snakes and other wildlife sheltering in structures, vehicles, and furniture
- Avoid direct contact with flood water, mud, and animal carcasses

2.6 MEDICAL

MEDICAL CHECKLIST	
TASK	INITIALS
Summon Emergency Medical Services (EMS) to the scene (FIGURE 3.1-3)	
Do not move the patient unless a situation (such as a fire) threatens their life	
If trained, provide first aid until the EMS arrives at the scene	
As the situation warrants, try to stop the bleeding and keep the patient breathing until the EMS arrives at the scene	
The rescuer's role includes: <ul style="list-style-type: none"> • Removing the patient from any situation threatening their life or the lives of rescuers • Correcting life-threatening problems and immobilizing injured parts before transporting the patient • Transporting the patient in a way that minimizes further damage to injured parts • Administering essential life support while the patient is being transported • Observing and protecting the patient until medical staff can take over • Administering care as indicated or instructed 	

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2.8 HYDROGEN SULFIDE (H₂S) RELEASE

H₂S (hydrogen sulfide gas) is a toxic substance found in most crude oils.

All crude oils contain some concentration of hydrogen sulfide (H₂S). Crude oils are typically classified as either a sweet crude or sour crude, depending on the percent (by weight) concentration of sulfur contained within that specific type of crude.

Sour crude contains more sulfur than sweet crude and presents a higher risk for the presence of H₂S.

- Sweet Crude - 0 to 0.50% sulfur (by weight)
- Sour Crude - over 0.50% sulfur (by weight)

Hydrogen sulfide is an extremely dangerous gas that may cause fatalities. It is colorless, may have a distinct rotten egg odor, is heavier than air, is soluble in fresh and salt water, and is highly flammable.

The key to handling crude safely is being knowledgeable of:

- established safety procedures to be followed,
- the hazards of H₂S and where they can be encountered in the work place, and
- the proper use and maintenance of H₂S monitoring and personal protective equipment.

H₂S can be in either a gas (air) or liquid (oil) state. H₂S levels can be higher in the air than in the oil from which it came.

2.8.1 General Requirements

- Employees will be aware of Hydrogen Sulfide and/or potential Hydrogen Sulfide work areas.
- Employees will monitor known and/or potential H₂S work areas with the appropriate atmospheric monitoring equipment and observe all warnings signs and wind indicators.
- All atmospheric monitoring equipment will be calibrated on a monthly basis and any problems with the equipment reported to the immediate Supervisor for repair/replacement.
- Employees will don a SCBA when H₂S levels are above 10 ppm.
- Employees will use SCBAs and have standby rescue personnel immediately available when H₂S levels reach >100 ppm.

Potential effects of H₂S are listed in **FIGURE 2.8-1**. The levels at which these effects occur are guidelines and may be experienced at lower levels during certain health conditions (i.e. such as when you have a cold, allergies, or are taking medication).

Questions regarding H₂S exposure shall be communicated to the Safety Representative and/or the HSE Manager's representative the operations Supervisor in charge.

FIGURE 2.8-1 - HYDROGEN SULFIDE EFFECTS

LEVEL	EFFECTS
1 ppm	Rotten egg odor detectable.
10 ppm	OSHA, PEL Limit (8-hour) May experience eye and/or throat irritation.
15 ppm	OSHA, STEL Limit (15-minute) May experience eye and/or throat irritation.
100 ppm	OSHA, IDLH Limit (Immediately Dangerous) Sense of smell loss in seconds; increased eye/throat irritation.
300 ppm	Sense of smell loss; severe eye/throat irritation; headache, dizziness or nausea may occur.
>500 ppm	Rapid unconsciousness and respiratory paralysis; death can occur within minutes unless rescued promptly and given CPR.

FIGURE 2.8-2 - HYDROGEN SULFIDE INITIAL RESPONSE ACTION CHECKLIST

ACTION
1. Continuously monitor for presence of H ₂ S.
2. Immediately evacuate if levels exceed 10 ppm.
3. Notify local health officials and responders.
4. Don a self-contained breathing apparatus (SCBA) prior to returning to H ₂ S environment.
5. Evacuate area in case of large discharges.
6. Notify local health and pollution control agencies.
7. Protect water intakes.
If there is fire:
Flashback along vapor trail may occur and may explode if ignited in an enclosed area.
1. Wear a full faced self-contained breathing apparatus (SCBA) or goggles and a half faced SCBA.
2. Stop flow if possible.
3. Cool exposed containers and personnel effecting shutoff with water.
If there is exposure:
1. Call for medical aid. Vapor is poisonous if inhaled. It is also irritating to eyes.
2. If breathing has stopped, give artificial respiration.
3. If breathing is difficult, give oxygen.
4. If in EYES, hold eyelids open and flush with plenty of water.

If there is water pollution:

- | |
|--|
| 1. Protect water intakes. |
| 2. Notify local health and wildlife officials. H ₂ S is harmful to aquatic life in very low concentrations. |
| 3. Notify operators of nearby water intakes. |

Source: Chemical Hazards Response Information System (CHRIS) Hazardous Chemical Data Manual, U.S. Department of Transportation, United States Coast Guard, 1998

2.9.2 Personal Respiratory Protection

Self Contained Breathing Apparatus (SCBA) is the only approved respiratory protective equipment that can be used when working in a H₂S contaminated environment.

2.9 FIRE AND/OR EXPLOSION

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

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST

TASK	INITIALS
At a manned facility	
Evaluate the situation; approach cautiously from upwind; do not rush in	
Notify the local police and fire departments	
Notify Operations Control and Qualified Individual	
Appropriately trained personnel may attempt to extinguish the fire if it is in the incipient (early) stage and if it can be done safely	
If the fire/explosion is a result of a pipe rupture, isolate product release by closing valves	
Undertake basic site control: <ul style="list-style-type: none"> • Make an assessment of hazards • Isolate the area • Keep people away from the scene and outside the safety perimeter • Establish safety zones and escape routes 	
Respond to the fire:	

<ul style="list-style-type: none"> Establish a Command Post and lines of communication Maintain site control Establish Incident Command/Unified Command as necessary, refer to <u>SECTION 4.3</u> 	
Call in additional resources if on scene personnel and equipment are inadequate to handle the emergency	
Conduct a post-emergency evaluation and report	

2.9 FIRE AND/OR EXPLOSION, CONTINUED

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

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST, CONTINUED

TASK	INITIALS
At an unmanned facility	
Notify the local police and fire departments	
Notify Operations Control and Qualified Individual	
Go to the incident scene to evaluate the situation; approach cautiously from upwind; do not rush in	
Undertake basic site control: <ul style="list-style-type: none"> Make an assessment of hazards Isolate the area Keep people away from the scene and outside the safety perimeter Establish safety zones and escape routes 	
If roads or railroads are in the affected area, assist the sheriff or local emergency officials with halting traffic	
Update next level manager	
If the fire/explosion is a result of a pipe rupture, isolate the product release by closing valves	
Respond to the fire: <ul style="list-style-type: none"> Establish a Command Post and lines of communication Maintain site control 	

<ul style="list-style-type: none"> Establish Incident Command/Unified Command as necessary, refer to SECTION 4.3 	
Call in additional resources if on scene personnel and equipment are inadequate to handle the emergency	
Conduct a post-emergency evaluation and report	

2.9.1 Storage Tank Seal Area Fire

STORAGE TANK SEAL AREA FIRE CHECKLIST	
TASK	INITIALS
Determine if the storage tank has a fixed suppression system. Initiate the system using a guide, along with local system instruction, if applicable. If no fixed suppression system exists, then proceed with this section.	
Close all dike drains.	
Coordinate with the fire department to cool the tank shell in the immediate area of the fire. Priority should be given to cooling the area of the gauging platform if it is involved in fire.	
Develop plans to pump water from the affected tank's dike area. Consider pumping into adjacent dikes as a first choice.	
Notify the local fire department and fire response specialist (as necessary). Refer to FIGURE 3.1-3 .	
DO NOT pump into or out of the tank - keep the floating roof stationary.	
Develop plans for pumping out the tank should the fire develop into a full-surface fire and align valves as necessary (provided this does not move the floating roof).	
Summon maintenance personnel to standby in case they are needed by the fire department.	

2.9.2 Storage Tank Full Surface Fire

STORAGE TANK FULL SURFACE FIRE CHECKLIST	
TASK	INITIALS
If a dike fire exists in conjunction with a tank fire, extinguish the dike fire first. - See SECTION 2.9.3 , Dike Area, Piping or Manifold Fire.	
Close all dike drain valves.	
Caution	
Do not create a back flow condition where product could flow into the tank or area on	

fire	
This should include all valves between the tank outlet and the manifold from which its contents will be distributed.	
Motor operated valves should be given priority over manual valves to assure they are properly positioned before a power/control failure occurs.	
Consider preparation for "drifting" or "sluicing" (gravity drainage) to adjacent tanks if pumping is not an option.	
Adjacent Tanks	
Floating Roof Tanks - Raise product level to maximum height. Do not move roof if tank shell has been deformed from heat.	
Cone Roof Tanks - Block in and do not change product level.	
Pump out burning tank at maximum volume	
If pumping capability is not available, seek alternate methods, such as gravity transfer to another tank.	
DO NOT transfer product into any cone roof tank in the same area as the fire. This may result in the liberation of vapors and additional fires.	
Protect the following from radiant heat: essential valve manifolds, pumps, transformers, and substations needed to affect tank pump-out. (Coordinate with Fire Department).	
Protection of exposed tanks is a secondary consideration. Cone roof tanks should be protected before floating roof tanks.	
Develop plans to pump water from the affected tank's dike area. Consider pumping into adjacent dikes as a first choice.	
Summon utility contractor or personnel to stand-by in case electrical repairs or re-routing becomes necessary during pump-out. Summon Maintenance personnel to stand-by in case they are needed by fire department.	
Upon arrival, tank fire experts will determine if extinguishment is feasible. If so, an attempt will be made to extinguish the fire. If not, the tank will be permitted to burn out until the fire declines to a point that is within the capabilities of the responders and the local water supply.	
Discontinue pumping out when liquid surface approaches top of tank nozzle. Watching the charring of the paint on the tank shell can determine tank level.	
Block in the tank once pumping out has been discontinued.	

2.9.3 Dike Area, Piping or Manifold Fire

DIKE AREA, PIPING OR MANIFOLD FIRE CHECKLIST	
TASK	INITIALS
Cease transfer operations into affected tank/line(s)	
Isolate leak, if possible.	

Close all dike drains.	
If a tank contributing product to the fire cannot be isolated, two options exist: either pump down the tank or inject water to displace the product.	
Pump-down option	
Caution	
Do not create a back flow condition where product could flow into the tank or area on fire	
Open all valves in the immediate area necessary to pump-out of the burning tank.	
This should include all valves between the tank outlet and the manifold from which its contents will be distributed.	
Motor operated valves should be given priority over manual valves to assure they are properly positioned before a power/control failure occurs.	
Consider preparation for "drifting" or "sluicing" (gravity drainage) to adjacent tanks if pumping is not an option.	
Water Injection option	
Find location in piping or manifold that will support connection of fire apparatus and allow pumping of water to the leak point.	
Caution	
Ensure no back flow of product into fire apparatus	
Using a check valve to prevent backflow, pump water through fire apparatus to the piping and/or tank involved. The water will raise the level of the product, eventually resulting in water issuing from the failed section versus product. Assume 0.5 psi for every foot the product level is above the point of injection. Fire apparatus discharge pressure must be above product head pressure to assure no backflow.	
Extinguish adjacent fires	
Manually isolate the fuel source to the fire via previously inaccessible valves.	
Adjacent Tanks	
Floating Roof Tanks - Raise product level to maximum height. Do not move roof if tank shell has been deformed from heat.	
Cone Roof Tanks - Block in and do not change product level.	
Protect the following from radiant heat: essential valve manifolds, pumps, transformers, and substations needed to affect tank pump-out. (Coordinate with Fire Department).	
Protection of exposed tanks is a secondary consideration. Cone roof tanks should be protected before floating roof tanks.	
Summon electrical utility personnel and company electricians to stand-by in case electrical repairs or re-routing becomes necessary during pump-out. Summon Maintenance personnel to stand-by in case they are needed by fire department.	

Upon arrival, tank/petroleum fire experts will determine if extinguishment is feasible. If so, an attempt will be made to extinguish the fire. If not, the fire will be permitted to burn out until the fire declines to a point that is within the capabilities of the responders and the local water supply.	
--	--

Once dike area, piping or manifold fire is extinguished, address any storage tank fires. See SECTION 2.9.2 for Full Surface Fires, and SECTION 2.9.1 for Seal Area Fires.	
---	--

2.9.4 Vent Fires (Cone Roof Tanks with no Floating Roof)

VENT FIRES (CONE ROOF TANKS WITH NO FLOATING ROOF) CHECKLIST	
TASK	INITIALS
Note	
This Section only applies to Cone Roof Tanks with a single vent, or just a few vents. If a full surface fire exists in this type of tank use SECTION 2.9.2 , Storage Tank Full Surface Fire	
Discontinue transfer operations to tank and isolate.	
DO NOT pump tank out.	
Identify cause of vapor release from vents.	
If vapor release is the result of normal tank breathing (warming temperatures, filling):	
<ul style="list-style-type: none"> Extinguish the fire with dry chemical, preferably from atop a fire department aerial apparatus. 	
<ul style="list-style-type: none"> Coordinate with the fire department to cool the vent(s) and immediate roof area once the fire has been extinguished. 	
If vapor release is due to product contamination (i.e: propane, butane, etc.) or from heat of exposing fire:	
<ul style="list-style-type: none"> Coordinate with the fire department to cool the vent(s) and immediate roof area. 	
<ul style="list-style-type: none"> Allow fire to burn out. 	

2.9.5 Vapor Releases

VAPOR RELEASES CHECKLIST	
TASK	INITIALS
Danger	
Vapors may ignite with tremendous force. Do not enter vapor cloud. Approach from upwind and uphill. Monitor area with Combustible Gas Meter if possible	
Cease transfer operations.	

Isolate tank or piping.	
Eliminate all potential ignition sources.	
Close all dike drains	
Allow vapors to dissipate naturally	
Note	
Extinguishment of a vapor fire will allow uncontrolled vapors to spread	
If vapor ignition occurs, protect exposures and determine if fire extinguishment is appropriate. In some situations it is safer to allow the fire to burn and protect exposures.	

2.9.6 Loading Rack Fires (Loading/Unloading Areas)

LOADING RACK FIRES CHECKLIST	
TASK	INITIALS
Evacuate the affected area.	
Caution	
Typical Loading Rack Emergency Stop features isolate electrical power to Loading Rack pumps and Vapor Units. Valves may remain open possibly allowing product to gravity drain to the Loading Rack	
Using the Emergency Stop feature, shut down the Loading Rack.	
Manually isolate piping to the Loading Rack, such as manifold or tank valves.	
If fire is contained to the Loading Rack area, attack fire when sufficient resources are available.	
If fire spreads outside the Loading Rack area, coordinate with Fire Department personnel to dike and redirect burning product away from facility systems, equipment, and buildings. Extinguish the fire when sufficient resources are present.	

SECTION 3 NOTIFICATIONS / TELEPHONE NUMBERS

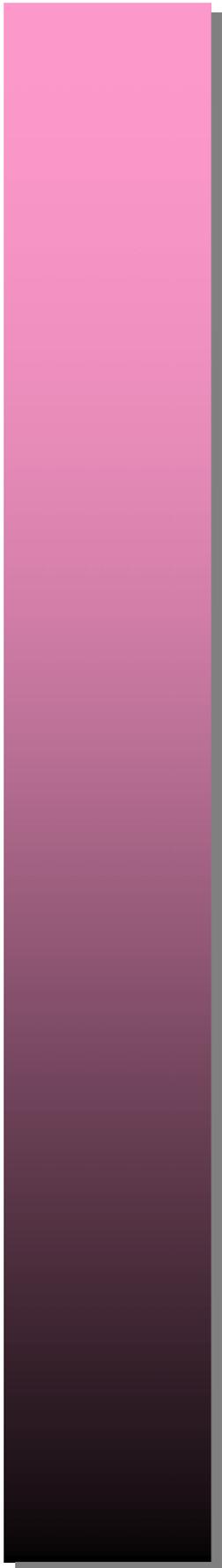
Last revised:

3.1 Emergency Information and Notification Procedures

Figure 3.1-1 - Emergency Notification Flowchart

Figure 3.1-2 - Accident Report - Hazardous Liquid Pipeline Systems

Figure 3.1-3 - Notifications and Telephone Numbers



3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES

The notification sequence for a spill is as follows:

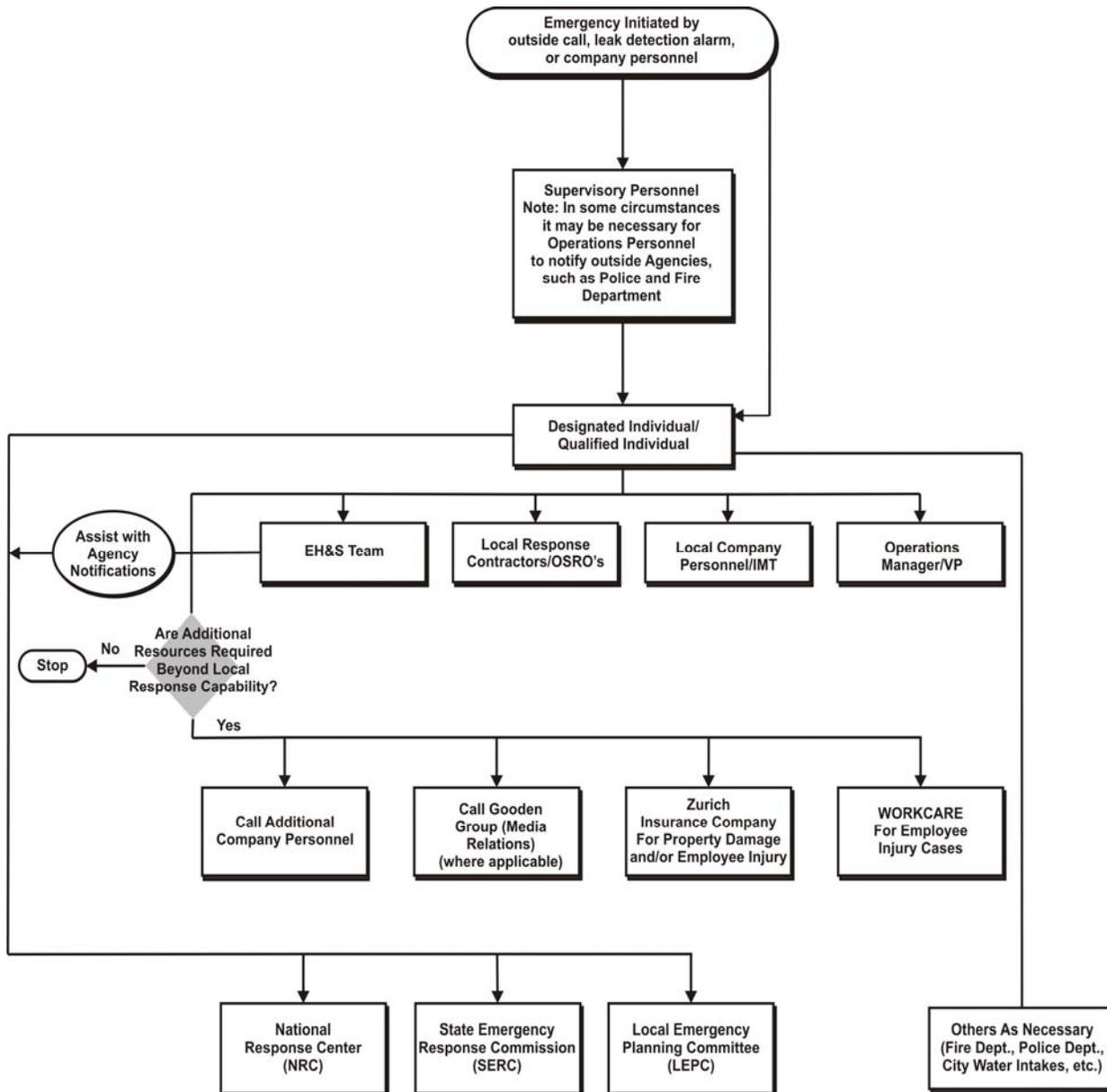
- Personnel will identify and control the source of a spill, if safe to do so, then will notify the Operations Control Center and Qualified Individual.
- The Qualified Individual will assume the role as Incident Commander (Qualified Individual) and will conduct notifications as illustrated in the Notification Flowchart (**FIGURE 3.1-1**).

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

This section also contains the following:

- **FIGURE 3.1-2** provides a Release/Spill Report Form. This form is utilized for initial and follow-up notifications. Follow-up notifications are the responsibility of the Liaison Officer.
- **FIGURE 3.1-3** provides a notification summary and documentation form to assist in documenting notifications.

FIGURE 3.1-1 - EMERGENCY NOTIFICATION FLOWCHART



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

Carbon Steel

Material other than Carbon Steel ⇨ Specify: _____

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

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

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

Rupture ⇨ Select Orientation: Circumferential Longitudinal Other _____

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

Overfill or Overflow

Other ⇨ Describe: _____

*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 contributing factor to the Accident? (*select only one*)

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

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

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

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

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

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

Investigation identified no control room issues

Investigation identified no controller issues

Investigation identified incorrect controller action or controller error

Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response

Investigation identified incorrect procedures

Investigation identified incorrect control room equipment operation

Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response

Investigation identified areas other than those above ⇨ Describe: _____

PART 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	
<input type="checkbox"/> External Corrosion	<p>*1. Results of visual examination: <input type="radio"/> Localized Pitting <input type="radio"/> General Corrosion <input type="radio"/> Other _____</p> <p>*2. Type of corrosion: (select all that apply) <input type="radio"/> Galvanic <input type="radio"/> Atmospheric <input type="radio"/> Stray Current <input type="radio"/> Microbiological <input type="radio"/> Selective Seam <input type="radio"/> Other _____</p> <p>*3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply) <input type="radio"/> Field examination <input type="radio"/> Determined by metallurgical analysis <input type="radio"/> Other _____</p> <p>*4. Was the failed item buried under the ground? <input type="radio"/> Yes ⇨ *4.a Was failed item considered to be under cathodic protection at the time of the Accident? <input type="radio"/> Yes ⇨ Year protection started: <u> / / / / / </u> <input type="radio"/> No *4.b Was shielding, tenting, or disbonding of coating evident at the point of the Accident? <input type="radio"/> Yes <input type="radio"/> No *4.c Has one or more Cathodic Protection Survey been conducted at the point of the Accident? <input type="radio"/> Yes, CP Annual Survey ⇨ Most recent year conducted: <u> / / / / / </u> <input type="radio"/> Yes, Close Interval Survey ⇨ Most recent year conducted: <u> / / / / / </u> <input type="radio"/> Yes, Other CP Survey ⇨ Most recent year conducted: <u> / / / / / </u> <input type="radio"/> No <input type="radio"/> No ⇨ 4.d Was the failed item externally coated or painted? <input type="radio"/> Yes <input type="radio"/> No</p> <p>*5. Was there observable damage to the coating or paint in the vicinity of the corrosion? <input type="radio"/> Yes <input type="radio"/> No</p>
<input type="checkbox"/> Internal Corrosion	<p>*6. Results of visual examination: <input type="radio"/> Localized Pitting <input type="radio"/> General Corrosion <input type="radio"/> Not cut open <input type="radio"/> Other _____</p> <p>*7. Cause of corrosion: (select all that apply) <input type="radio"/> Corrosive Commodity <input type="radio"/> Water drop-out/Acid <input type="radio"/> Microbiological <input type="radio"/> Erosion <input type="radio"/> Other _____</p> <p>*8. The cause(s) of corrosion selected in Question 7 is based on the following: (select all that apply) <input type="radio"/> Field examination <input type="radio"/> Determined by metallurgical analysis <input type="radio"/> Other _____</p> <p>*9. Location of corrosion: (select all that apply) <input type="radio"/> Low point in pipe <input type="radio"/> Elbow <input type="radio"/> Other _____</p> <p>*10. Was the commodity treated with corrosion inhibitors or biocides? <input type="radio"/> Yes <input type="radio"/> No</p> <p>11. Was the interior coated or lined with protective coating? <input type="radio"/> Yes <input type="radio"/> No</p> <p>12. Were cleaning/dewatering pigs (or other operations) routinely utilized? <input type="radio"/> Not applicable - Not mainline pipe <input type="radio"/> Yes <input type="radio"/> No</p> <p>13. Were corrosion coupons routinely utilized? <input type="radio"/> Not applicable - Not mainline pipe <input type="radio"/> Yes <input type="radio"/> No</p>
<p>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.</p> <p>14. List the year of the most recent inspections: 14.a API Std 653 Out-of-Service Inspection <u> / / / / / </u> <input type="radio"/> No Out-of-Service Inspection completed 14.b API Std 653 In-Service Inspection <u> / / / / / </u> <input type="radio"/> No In-Service Inspection completed</p>	

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?
 Yes No

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

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

16. 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

17. Has one or more Direct Assessment been conducted on this 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

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

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

G2 - Natural Force Damage - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Earth Movement, NOT due to Heavy Rains/Floods	1. Specify: <input type="radio"/> Earthquake <input type="radio"/> Subsidence <input type="radio"/> Landslide <input type="radio"/> Other _____
<input type="checkbox"/> Heavy Rains/Floods	2. Specify: <input type="radio"/> Washout/Scouring <input type="radio"/> Flotation <input type="radio"/> Mudslide <input type="radio"/> Other _____
<input type="checkbox"/> Lightning	3. Specify: <input type="radio"/> Direct hit <input type="radio"/> Secondary impact such as resulting nearby fires
<input type="checkbox"/> Temperature	4. Specify: <input type="radio"/> Thermal Stress <input type="radio"/> Frost Heave <input type="radio"/> Frozen Components <input type="radio"/> Other _____
<input type="checkbox"/> High Winds	
<input type="checkbox"/> 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	
<input type="checkbox"/> Excavation Damage by Operator (First Party)	
<input type="checkbox"/> Excavation Damage by Operator's Contractor (Second Party)	
<input type="checkbox"/> Excavation Damage by Third Party	
<input type="checkbox"/> Previous Damage due to Excavation Activity	<p>Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</p> <p>1. Has one or more internal inspection tool collected data at the point of the Accident? <input type="radio"/> Yes <input type="radio"/> No</p> <p>1.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</p> <p><input type="radio"/> Magnetic Flux Leakage / / / / / /</p> <p><input type="radio"/> Ultrasonic / / / / / /</p> <p><input type="radio"/> Geometry / / / / / /</p> <p><input type="radio"/> Caliper / / / / / /</p> <p><input type="radio"/> Crack / / / / / /</p> <p><input type="radio"/> Hard Spot / / / / / /</p> <p><input type="radio"/> Combination Tool / / / / / /</p> <p><input type="radio"/> Transverse Field/Triaxial / / / / / /</p> <p><input type="radio"/> Other _____ / / / / / /</p> <p>2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained? <input type="radio"/> Yes <input type="radio"/> No</p> <p>3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?</p> <p><input type="radio"/> Yes ⇨ Most recent year tested: / / / / / / Test pressure (psig): / / / / / /</p> <p><input type="radio"/> No</p> <p>4. Has one or more Direct Assessment been conducted on the pipeline segment?</p> <p><input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: / / / / / /</p> <p><input type="radio"/> Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: / / / / / /</p> <p><input type="radio"/> No</p> <p>5. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002? <input type="radio"/> Yes <input type="radio"/> No</p> <p>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:</p> <p><input type="radio"/> Radiography / / / / / /</p> <p><input type="radio"/> Guided Wave Ultrasonic / / / / / /</p> <p><input type="radio"/> Handheld Ultrasonic Tool / / / / / /</p> <p><input type="radio"/> Wet Magnetic Particle Test / / / / / /</p> <p><input type="radio"/> Dry Magnetic Particle Test / / / / / /</p> <p><input type="radio"/> Other _____ / / / / / /</p>
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? <input type="radio"/> Yes <input type="radio"/> No	
*6.a If Yes, Notification received from: (select all that apply) <input type="radio"/> One-Call System <input type="radio"/> Excavator <input type="radio"/> Contractor <input type="radio"/> Landowner	

*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*)

G4 - Other Outside Force Damage - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Accident	
<input type="checkbox"/> Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation	1. Vehicle/Equipment operated by: <i>(select only one)</i> <input type="radio"/> Operator <input type="radio"/> Operator's Contractor <input type="radio"/> Third Party
<input type="checkbox"/> 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: <input type="radio"/> Hurricane <input type="radio"/> Tropical Storm <input type="radio"/> Tornado <input type="radio"/> Heavy Rains/Flood <input type="radio"/> Other _____
<input type="checkbox"/> Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation	
<input type="checkbox"/> Electrical Arcing from Other Equipment or Facility	
<input type="checkbox"/> Previous Mechanical Damage NOT Related to Excavation	<p>Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</p> <p>3. Has one or more internal inspection tool collected data at the point of the Accident? <input type="radio"/> Yes <input type="radio"/> No</p> <p>3.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</p> <p><input type="radio"/> Magnetic Flux Leakage / / / / / / / /</p> <p><input type="radio"/> Ultrasonic / / / / / / / /</p> <p><input type="radio"/> Geometry / / / / / / / /</p> <p><input type="radio"/> Caliper / / / / / / / /</p> <p><input type="radio"/> Crack / / / / / / / /</p> <p><input type="radio"/> Hard Spot / / / / / / / /</p> <p><input type="radio"/> Combination Tool / / / / / / / /</p> <p><input type="radio"/> Transverse Field/Triaxial / / / / / / / /</p> <p><input type="radio"/> Other _____ / / / / / / / /</p> <p>4. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained? <input type="radio"/> Yes <input type="radio"/> No</p> <p>5. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?</p> <p><input type="radio"/> Yes ⇨ Most recent year tested: / / / / / / / / Test pressure (psig): / / / / / / / /</p> <p><input type="radio"/> No</p> <p>6. Has one or more Direct Assessment been conducted on the pipeline segment?</p> <p><input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: / / / / / / / /</p> <p><input type="radio"/> Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: / / / / / / / /</p> <p><input type="radio"/> No</p> <p><i>(This section continued on next page with Question 7.)</i></p>

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

G6 - Equipment Failure - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Malfunction of Control/Relief Equipment	1. Specify: <i>(select all that apply)</i> <input type="radio"/> Control Valve <input type="radio"/> Instrumentation <input type="radio"/> SCADA <input type="radio"/> Communications <input type="radio"/> Block Valve <input type="radio"/> Check Valve <input type="radio"/> Relief Valve <input type="radio"/> Power Failure <input type="radio"/> Stopple/Control Fitting <input type="radio"/> ESD System Failure <input type="radio"/> Other _____
<input type="checkbox"/> Pump or Pump-related Equipment	2. Specify: <input type="radio"/> Seal/Packing Failure <input type="radio"/> Body Failure <input type="radio"/> Crack in Body <input type="radio"/> Appurtenance Failure <input type="radio"/> Other _____
<input type="checkbox"/> Threaded Connection/Coupling Failure	3. Specify: <input type="radio"/> Pipe Nipple <input type="radio"/> Valve Threads <input type="radio"/> Mechanical Coupling <input type="radio"/> Threaded Pipe Collar <input type="radio"/> Threaded Fitting <input type="radio"/> Other _____
<input type="checkbox"/> Non-threaded Connection Failure	4. Specify: <input type="radio"/> O-Ring <input type="radio"/> Gasket <input type="radio"/> Seal (NOT pump seal) or Packing <input type="radio"/> Other _____
<input type="checkbox"/> Defective or Loose Tubing or Fitting	
<input type="checkbox"/> Failure of Equipment Body (except Pump), Tank Plate, or other Material	
<input type="checkbox"/> 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: <i>(select all that apply)</i> <input type="radio"/> Excessive vibration <input type="radio"/> Overpressurization <input type="radio"/> No support or loss of support <input type="radio"/> Manufacturing defect <input type="radio"/> Loss of electricity <input type="radio"/> Improper installation <input type="radio"/> Mismatched items (different manufacturer for tubing and tubing fittings) <input type="radio"/> Dissimilar metals <input type="radio"/> Breakdown of soft goods due to compatibility issues with transported commodity <input type="radio"/> Valve vault or valve can contributed to the release <input type="radio"/> Alarm/status failure <input type="radio"/> Misalignment <input type="radio"/> Thermal stress <input type="radio"/> Other _____	

G7 - Incorrect Operation - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage	
<input type="checkbox"/> Tank, Vessel, or Sump/Separator Allowed or Caused to Overflow or Overflow	1. Specify: <input type="radio"/> Valve misalignment <input type="radio"/> Incorrect reference data/calculation <input type="radio"/> Miscommunication <input type="radio"/> Inadequate monitoring <input type="radio"/> Other _____
<input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure	
<input type="checkbox"/> Pipeline or Equipment Overpressured	
<input type="checkbox"/> Equipment Not Installed Properly	
<input type="checkbox"/> Wrong Equipment Specified or Installed	
<input type="checkbox"/> Other Incorrect Operation	*2. Describe: _____
<p>Complete the following if any Incorrect Operation sub-cause is selected.</p> <p>*3. Was this Accident related to: <i>(select all that apply)</i></p> <p><input type="radio"/> Inadequate procedure <input type="radio"/> No procedure established <input type="radio"/> Failure to follow procedure <input type="radio"/> Other: _____</p> <p>*4. What category type was the activity that caused the Accident:</p> <p><input type="radio"/> Construction <input type="radio"/> Commissioning <input type="radio"/> Decommissioning <input type="radio"/> Right-of-Way activities <input type="radio"/> Routine maintenance <input type="radio"/> Other maintenance <input type="radio"/> Normal operating conditions <input type="radio"/> Non-routine operating conditions (abnormal operations or emergencies)</p> <p>*5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program? <input type="radio"/> Yes <input type="radio"/> No</p> <p>*5.a If Yes, were the individuals performing the task(s) qualified for the task(s)?</p> <p><input type="radio"/> Yes, they were qualified for the task(s) <input type="radio"/> No, but they were performing the task(s) under the direction and observation of a qualified individual <input type="radio"/> No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual</p>	
G8 – Other Accident Cause - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Miscellaneous	*1. Describe: _____ _____
<input type="checkbox"/> Unknown	*2. Specify: <input type="radio"/> Investigation complete, cause of Accident unknown <input type="radio"/> Still under investigation, cause of Accident to be determined* <i>(*Supplemental Report required)</i>

INSTRUCTIONS FOR FORM PHMSA F 7000-1 (Rev. 01-2010)
ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS

Revised (11/2010)

GENERAL INSTRUCTIONS

Each hazardous liquid pipeline operator shall file a written report for an accident that meets the criteria in 49 CFR §195.50 as soon as practicable but not more than 30 days after discovery of the accident, using the appropriate form. Hazardous liquid releases during maintenance activities need not be reported if the spill was less than 5 barrels, not otherwise reportable under 49 CFR §195.50, did not result in water pollution as described by 49 CFR §195.52(a)(4), was confined to company property or pipeline right-of-way, and was cleaned up promptly. Any spill of 5 gallons or more to water shall be reported.

If you need copies of the Form PHMSA F 7000-1 and/or instructions they can be found on the Pipeline Safety Community main page, <http://phmsa.dot.gov/pipeline>, by clicking the Library hyperlink and then the Forms hyperlink under the “Mini Menu” on the right of the web page. The applicable forms are listed in the section titled Accidents/Incidents/Annual Reporting Forms. If you have questions about this report or these instructions, please call (202) 366-8075. Please type or print all entries when submitting forms by mail or Fax.

195.50 Reporting accidents.

An accident report is required for each failure in a pipeline system subject to this part in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:

(a) Explosion or fire not intentionally set by the operator.

(b) Release of 5 gallons (19 liters) or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than 5 barrels (0.8 cubic meters) resulting from a pipeline maintenance activity if the release is:

(1) Not otherwise reportable under this section;

(2) Not one described in §195.52(a)(4);

(3) Confined to company property or pipeline right-of-way; and

(4) Cleaned up promptly;

(c) Death of any person;

(d) Personal injury necessitating hospitalization;

(e) Estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.

195.52 Telephonic Notice of Certain Accidents.

(a) At the earliest practicable moment following discovery of a release of the hazardous liquid or carbon dioxide transported resulting in an event described in §195.50, the operator of the system shall give notice, in accordance with paragraph (b) of this section, of any failure that:

- (1) Caused a death or a personal injury requiring hospitalization;**
- (2) Resulted in either a fire or explosion not intentionally set by the operator;**
- (3) Caused 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;**
- (4) Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or**
- (5) In the judgment of the operator was significant even though it did not meet the criteria of any other paragraph of this section.**

(b) Reports made under paragraph (a) of this section are made by telephone to 800-424-8802 (for those without 800 access: 202-267-2675) and must include the following information:

- (1) Name and address of the operator.**
- (2) Name and telephone number of the reporter.**
- (3) The location of the failure.**
- (4) The time of the failure.**
- (5) The fatalities and personal injuries, if any.**
- (6) All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages.**

Telephonic reports are assigned an NRC number, which operators should note. **When applicable, National Response Center call information must be reported in Question 6 of the Form PHMSA F 7000-1.**

§ 195.54 Accident reports.

(a) Each operator that experiences an accident that is required to be reported under §195.50 shall as soon as practicable, but not later than 30 days after discovery of the accident, prepare and file an accident report on DOT Form 7000–1, or a facsimile.

(b) Whenever an operator receives any changes in the information reported or additions to the original report on DOT Form 7000–1, it shall file a supplemental report within 30 days.

REPORTING METHODS

Use one of the following methods to submit your report. We strongly encourage online reporting over hardcopy submissions. If you prefer, you can mail or fax your completed reports to DOT/PHMSA.

1. Online

- a. Navigate to the new **Electronic Incident Accident (EIA) System** at the following URL <http://pipelineonlinereporting.phmsa.dot.gov/>.
- b. Enter Operator ID and PIN (*the name that appears is the operator name assigned to the operator ID and PIN and is automatically populated by our database and cannot be changed by the operator at the time of filing*).
- c. Under “**Create Reports**” on the left side of the screen, select the type of report you would like to create (i.e., gas transmission or gas distribution incident, or hazardous liquid accident) and proceed with entering your data. **Note:** *Data fields marked with a single asterisk are considered required fields that must be completed before the system will accept your initial filing.*
- d. Click “**Submit**” when finished with your filing to have your report uploaded to our database; or click “**Save**” which doesn’t submit the report to PHMSA but stores it in a draft status to allow you to come back to complete your filing at a later time. **Note:** *The “Save” feature will allow you to start a report and save a draft of it which you can print out to gather additional information and then come back to accurately complete your data entry before submitting it to PHMSA.*
- e. Once you hit [Submit], the system will return you to the initial view of the screen that lists your [Saved Incident/Accident Reports] in the top portion of the screen and your [Submitted Incident/Accident Reports] in the bottom portion of the screen. **Note:** *To confirm that your report was successfully submitted to PHMSA, look for it in the bottom portion of the screen where you can also view a PDF of what you submitted.*

Note: Supplemental Report Filing – follow steps 1.a and 1.b above and then select a report from the [Submitted Incident/Accident Reports] lists as described in step 1.e. The report will default to supplemental and pre-populate data fields with data you previously submitted. At this point, you can amend your data and re-submit the report to PHMSA.

If you submit your report online, PLEASE DO NOT MAIL OR FAX the completed report to DOT as this may result in duplicate entries.

2. Mail to:

DOT/PHMSA Office of Pipeline Safety
Information Resources Manager,
1200 New Jersey Ave., SE
East Building, 2nd Floor, (PHP-20)
Room Number E22-321
Washington, DC 20590

3. Fax to: Information Resources Manager at (202) 366-4566.

30-DAY WRITTEN REPORT RETRACTION

An operator who submits a 30-day written report for an accident and upon subsequent investigation determines the accident did not meet the criteria in 49 CFR 195.50 should request to have the report retracted. Requests to retract a 30-day written report should be submitted on operator letterhead and mailed or faxed to the Information Resources Manager at the address/fax number above. Letters to request retraction may also be submitted as email attachments to InformationResourcesManager@dot.gov. Requests should include the following information:

- a. The Report ID, the unique 8-digit identifier assigned by PHMSA,
- b. Operator name,
- c. PHMSA-issued operator ID number,
- d. Date of the accident,
- e. Location of the accident (e.g., for onshore accidents: city, county, state), and
- f. A brief statement as to why the 30-day written report should be retracted.

SPECIAL INSTRUCTIONS

1. Certain data fields must be completed before an Original Report will be accepted. The data fields that must be completed for an Original Report to be accepted are indicated on the form by a single asterisk (*). If filing a hardcopy of this report, the report will not be accepted by PHMSA unless all of these fields have been completed. If filing on-line, your Original Report will not be able to be submitted until the required information has been provided, although your partially completed form can be saved on-line so that you can return at a later time to provide the missing information.

-
2. An entry should be made in each applicable space or check box, unless otherwise directed by the section instructions.
 3. If the data is unavailable, enter “unknown” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank.
 4. If possible, provide an **estimate** in lieu of answering a question with “unknown” or leaving the field blank. Estimates should be based on best-available information and reasonable effort.
 5. For unknown or estimated data entries, the operator should file a supplemental report when additional information becomes available to finalize the report.
 6. If the question is not applicable, please enter “N/A” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank.
 7. For questions requiring numeric answers, all data fields should be filled in using zeroes when appropriate. When decimal points are required, **the decimal point should be placed in a separate block** in the data field.

Examples:

(Part C, item 3.a,) Nominal diameter of pipe (in):	<u>/0/0/2/4/</u>	(24 inches)
	<u>/3/./5/</u>	(3.5 inches)
(Part C, item 3.b), Wall thickness (in)	<u>/0/./3/1/2/</u>	(0.312 inches)
(Part C, item 3.c), SMYS	<u>/0/5/2/,/0/0/0/</u>	(52,000 psi)

8. If **OTHER** is checked for any answer to a question, please include an explanation or description on the line provided next to the item checked.
9. Pay close attention to each question for the phrase:
 - a. **(select all that apply)**
 - b. **(select only one)**

If the phrase does not exist for a given question, then “select only one” is the default instruction. “Select all that apply” means that you should choose all answers that are applicable. “Select only one” means that you should select the single, primary or most applicable answer. **DO NOT SELECT MORE ANSWERS THAN REQUESTED.**
10. **Date format** = mm/dd/yy or for year = /yyyy/
11. **Time format:** All times are reported as a 24-hour clock:

Time format Examples:

a. (0000) = midnight	=	<u>/0/0/0/0/</u>
b. (0800) = 8:00 a.m.	=	<u>/0/8/0/0/</u>
c. (1200) = Noon	=	<u>/1/2/0/0/</u>

d. (1715) = 5:15 p.m. = /1/7/1/5/

e. (2200) = 10:00 p.m. = /2/2/0/0/

12. **Local time** always refers to time at the site of the accident.

SPECIFIC INSTRUCTIONS

PART A – GENERAL REPORT INFORMATION

Report Type: (select all that apply)

Check the appropriate report box or boxes to indicate the type of report being filed. Depending on the descriptions below, the following combinations of boxes may be selected:

- Original Report only
- Original Report plus Final Report
- Supplemental Report only
- Supplemental Report plus Final Report

Original Report

Select this type of report if this is the **FIRST** report filed for this accident.

If all of the information requested is known and provided at the time the initial report is filed, including final property damages and accident cause information, check the box for “Final Report” as well as the box for “Original Report,” indicating that no further information will be forthcoming.

Supplemental Report

Select this type of report only if you have already filed an “Original Report” AND you are now providing new, updated, and/or corrected information. Multiple supplements are to be submitted as needed in order to provide new, updated, and/or corrected information as it becomes available.

In cases where an incident results in long-term remediation, an operator may cease filing Supplemental Reports in the following situations and, instead, file a Final Report even when additional remediation costs and recovery of released commodity are still occurring:

1. When the incident response consists only of long-term remediation and/or monitoring which is being conducted under the auspices of an authorized governmental agency or entity.
2. When the estimated final costs and volume of commodity recovered can be predicted with a reasonable degree of certainty.
3. When the volume of commodity recovered over time is consistently decreasing to the point where an estimated total volume of commodity recovered can be predicted with a reasonable degree of accuracy.
4. When the operator can justify (and explain in the Part H – Narrative) that the

continuation of Supplemental Report filings in the future will not provide any essential information which will be critically different than that contained in a Final Report filed currently.

In any of these cases, though, if the reported total volume of commodity released or other previously reported data other than “Estimated cost of Operator’s environmental remediation” or “Estimated volume of commodity recovered” is found to be inaccurate, a Supplemental Report is still required.

For Supplemental Reports filed by fax or mail, please check the **Supplemental Report** box, complete Part A, Items 1 through 6, and then enter information that has changed or is being added. Please do not enter previously submitted information that has not changed other than Items 1-6, which are needed to provide a way to identify previously filed reports.

For Supplemental Reports filed online, all data previously submitted will automatically populate in the form. Page through the form to make edits and additions where needed.

Operators are encouraged to file supplemental reports within one year in those instances where the supplemental report is used to update information from investigations that were still ongoing when the prior report was filed.

Final Report

Select this type of report if you are filing an “Original Report” for which no further information will be forthcoming (as described under “Original Report” above) or if you have already filed an “Original Report” AND you are now providing new, updated, and/or corrected information via a “Supplemental Report” AND you are reasonably certain that no further information will be forthcoming. (Note: If an Operator files one of the two types of “Final” Reports and then subsequently finds that new information needs to be provided, it should submit another “Supplemental Report” and select the appropriate box or boxes – “Supplemental + Final” (if appropriate) – for the newly submitted report and include an explanation in the PART H Narrative.)

Supplemental reports must be filed within 30 days following the Operator’s awareness of new, additional, or updated information. Failure to comply with these requirements can result in enforcement actions, including the assessment of civil penalties not to exceed \$100,000 for each violation for each day that such violation persists up to a maximum of \$1,000,000

Required Fields for Small Releases:

If the release is at least 5 gallons but is less than 5 barrels with no additional consequences (see below), complete only the fields indicated by light-grey shading. If the spill is to water as described in 49 CFR §195.52(a)(4) or is otherwise reportable under §195.50, then the entire Form F 7000-1 must be completed.

The entire form must be completed for any releases that

- Involve death or personal injury requiring hospitalization; or
- Involve fire or explosion; or
- Are 5 barrels or more; or

-
- Have property damage greater than \$50,000; or
 - Result in pollution of a body of water.

If any of these events occurred, complete the entire Form F 7000-1.

In Part A, answer questions from 1 thru 18 by providing the requested information or by checking the appropriate box.

1. Operator's OPS -Issued Operator Identification Number (OPID):

The Pipeline and Hazardous Materials Safety Administration (PHMSA) assigns the operator's identification number. Most OPIDs are 5 digits. Older OPIDs may contain fewer digits. If your OPID contains fewer than 5 digits, insert leading zeros to fill all blanks. Contact us at (202) 366-8075 if you need assistance with an identification number during our business hours of 8:30 AM to 5:00 PM Eastern Time.

2. Name of Operator

This is the company name used when registering for an Operator ID and PIN in the Online Data Entry System. For online entries, the Name of Operator should be automatically filled in based on the Operator Identification Number entered in question 1. If the name that appears does not coincide with the Operator ID, contact PHMSA at the number provided in Question 1.

3. Address of Operator

Enter the address of the operator's business office to which any correspondence related to the accident report should be sent.

4. Local time (24-hour clock) and date of the Accident.

For pipeline systems crossing multiple time zones, enter the time at the location of the accident.

See page 5 for examples of **Date format** and **Time format** expressed as a 24-hour clock

5. Location of Accident:

The latitude and longitude of the accident are to be reported as Decimal Degrees with a minimum of 5 decimal places (e.g. Lat: 38.89664 Long: -77.04327), using the NAD83 or WGS84 datums.

If you have coordinates in degrees/minutes or degrees/minutes/seconds use the formula below to convert to decimal degrees:

$$\text{degrees} + (\text{minutes}/60) + (\text{seconds}/3600) = \text{decimal degrees}$$

e.g. $38^{\circ} 53' 47.904'' = 38 + (53/60) + (47.904/3600) = 38.89664^{\circ}$

All locations in the United States will have a negative longitude coordinate, **which has already been printed on the form.**

If you cannot locate the accident with a GPS or some other means, the U.S. Census Bureau provides a tool for determining latitude and longitude, (<http://tiger.census.gov/cgi-bin/mapbrowse-tbl>). You can use the online tool to identify the geographic location of the accident. The tool displays the latitude and longitude in decimal degrees below the map. Any questions regarding the required format, conversion or how to use the tool noted above can be directed to Amy Nelson (202.493.0591 or amy.nelson@dot.gov).

6. National Response Center (NRC) Report Number

Accidents meeting the criteria outlined in §195.52 are to be reported directly to the **24-hour National Response Center (NRC): at 1-800-424-8802** at the earliest practicable moment (generally within 2 hours). The number of that telephonic report is to be entered in Question 6.

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

Enter the time (local time at site of the accident) and date of the telephonic report of accident. The time should be shown by 24-hour clock notation (see page 5 for examples).

8. Commodity Released

Select only one primary description of the commodity and then, where applicable, the secondary description of the commodity, based on the predominant volume released. Only releases of transported commodities are reportable.

Crude Oil

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

Refined and/or Petroleum Product includes gasoline, diesel, jet fuel, kerosene, fuel oils, or other refined or petroleum products which are a liquid at ambient conditions. They are flammable, toxic, or corrosive products obtained from distilling or processing of crude oil, unfinished oils, natural gas liquids, blend stocks, and other miscellaneous hydrocarbon compounds. For a non-HVL petrochemical feedstock, such as propylene, report as "other" and specify the name of the commodity (e.g., "propylene") in the space provided.

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

Highly Volatile Liquids (HVLs) are hazardous liquids or liquid mixtures which will form a vapor cloud when released to the atmosphere and have a vapor pressure exceeding 276 kPa at 37.8 C.

Other Flammable or Toxic Fluids are those defined under 49 CFR 173.120 Class 3—
Definitions

Other flammable or toxic fluids which fall under this category include gases at ambient conditions, such as anhydrous ammonia (NH₃) and propane. For a petrochemical feedstock, such as ethane or ethylene, which is also classified as a highly volatile liquid, report as “Other HVL” and specify the appropriate name (e.g., “ethane” or “ethylene”) in the space provided.

CO₂ (Carbon Dioxide)

Biofuel/Alternate Fuel (including ethanol blends)

Fuel Grade Ethanol is denatured ethanol before it has been mixed with a petroleum product or other hydrocarbon; sometimes also referred to as neat ethanol.

Ethanol Blend is ethanol plus a petroleum product such as gasoline. Such mixtures may be referred to as E10 or E85, for example, representing a 10% or 85% blend respectively. In the space provided, specify the percentage of ethanol in the mixture. Blends greater than 95% ethanol should be reported as Fuel Grade Ethanol.

Biodiesel is a diesel liquid distilled from biological feedstocks vs. crude oil. Biodiesel is typically shipped as a blend mixed with a petroleum product. Report the percentage biodiesel in the blend as shown. For pure biodiesel, report 100.

9. Estimated volume of commodity released unintentionally:

An estimate of the volume released may be based on a variety and/or combination of inputs, including

- calculations made by hydraulic engineers
- volume added to the pipeline segment to repack the line when the line is placed back in service
- measured volume of free phase commodity recovered, with allowances for commodity that is not recovered.
- volume calculated to be absorbed by soil or water
- volume calculated to have been lost to evaporation (e.g., for gasoline spills)

Report all estimated volumes in BARRELS. Barrel means a unit of measurement equal to **42 U.S. standard gallons**. The table below converts gallons to barrels.

If estimated volume is	Report	If estimated volume is	Report
5	gallons 0.12 barrels	24	gallons 0.57 barrels
6	gallons 0.14 barrels	25	gallons 0.60 barrels
7	gallons 0.17 barrels	26	gallons 0.62 barrels
8	gallons 0.19 barrels	27	gallons 0.64 barrels
9	gallons 0.21 barrels	28	gallons 0.67 barrels
10	gallons 0.24 barrels	29	gallons 0.69 barrels
11	gallons 0.26 barrels	30	gallons 0.71 barrels
12	gallons 0.29 barrels	31	gallons 0.74 barrels
13	gallons 0.31 barrels	32	gallons 0.76 barrels
14	gallons 0.33 barrels	33	gallons 0.79 barrels
15	gallons 0.36 barrels	34	gallons 0.81 barrels
16	gallons 0.38 barrels	35	gallons 0.83 barrels
17	gallons 0.41 barrels	36	gallons 0.86 barrels
18	gallons 0.43 barrels	37	gallons 0.88 barrels
19	gallons 0.45 barrels	38	gallons 0.91 barrels
20	gallons 0.48 barrels	39	gallons 0.93 barrels
21	gallons 0.50 barrels	40	gallons 0.95 barrels
22	gallons 0.52 barrels	41	gallons 0.98 barrels
23	gallons 0.55 barrels	42	gallons 1.000 barrels

10. Estimated volume of intentional and/or controlled release/blowdown:

Estimate the amount of commodity that was released during any intentional release or controlled blowdown conducted as part of responding to or recovering from the incident. Intentional and controlled blowdown implies a level of control of the site and situation by the Operator such that the area and the public are protected during the controlled release.

11. Estimated volume of commodity recovered:

Recovered means the commodity is no longer in the environment. The commodity could have been removed by: absorbent pads or similar mechanisms; transferring to temporary storage such as a vacuum truck, a frac tank, or similar vessel; soil removal; bio-remediation; or other similar means of removal or recovery. The volume can be estimated based on a variety or combination of the measurement of free phase commodity recovered, the amount calculated to be absorbed by soil or water that was removed from the environment, measurement of oil extracted from absorbent pads, etc. For special considerations related to long-term remediation, see the instructions accompanying Supplemental Report under Part A – General Report Information.

Report all estimated volumes in BARRELS. See conversion table above to convert from gallons to barrels.

12. Were there fatalities?

If a person dies at the time of the accident or within 30 days of the initial accident date due to injuries sustained as a result of the accident, report as a fatality. If a person dies

subsequent to an injury more than 30 days past the accident date, report as an injury. This aligns with the Department of Transportation's general guidelines for all modes for reporting deaths and injuries.

Contractor employees working for the operator means people hired to work for or on behalf of the operator of the pipeline.

Non-operator emergency responders means people responding to render professional aid at the accident scene including on-duty fire fighters, rescue workers, EMTs, police officers, etc. "Good Samaritans" that stop to assist should be reported as "General public."

Workers Working on the Right of Way, but NOT Associated with this Operator means people authorized to work in or near the right-of-way, but not hired by or working on behalf of the operator of the pipeline. This includes all work conducted within the right of way including work associated with other underground facilities sharing the right of way, building/road construction in or across the right of way, or farming. This category most often includes employees of other pipelines or underground facilities operators, or their contractors, working in or near a shared right-of-way. Workers performing work near, but not on, the right of way and who are affected should be reported as general public.

13. Were there injuries requiring inpatient hospitalization?

Injuries requiring inpatient hospitalization mean injuries sustained as a result of the accident which require both hospital admission *and* at least one overnight stay.

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

Report any shutdowns that occur as a result of the accident (including but not limited to those required for damage assessment, repair, and clean-up). Instances in which an accident was caused by a release that did not involve damage to the pipeline (e.g., incorrect operations) and in which no need for repairs resulted need not be reported as being shutdown, even though the pipeline may have been shutdown as a precautionary measure to inspect for damages.

If No is selected, explain the reason that no shutdown was needed in the blank provided.

If Yes is selected, complete questions 14.a and 14.b.

14.a. Local time (24hr clock) and date of shutdown

For pipeline systems crossing multiple time zones, enter the time at the location of the accident.

14.b. Local time pipeline/facility restarted

Report the time the pipeline/facility was restarted (if applicable). If the pipeline or facility has not been restarted at the time of reporting, check "Still shut down" and then include the restart time in a future Supplemental Report.

15. Did the Commodity Ignite?

Ignite means the commodity caught fire.

16. Did the Commodity Explode?

Explode means the release of the transported commodity resulted in a sudden and violent release of energy, whether accompanied by a fire involving the released commodity or not.

17. Number of General Public Evacuated:

The number of people evacuated should be estimated based on operator knowledge, or police, fire or other emergency responder reports or estimates. If there was no evacuation involving the general public, report "0." If an estimate is not possible for some reason, leave blank but include an explanation of why it was not possible in the Part H Narrative.

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

Enter the time the operator became aware that an event constituted an accident (i.e., identified the accident) and the time operator personnel or contract resources (i.e., personnel and/or equipment) arrived on site. All times should be local times at the location of the accident.

PART B – ADDITIONAL LOCATION INFORMATION**1. Was the origin of the Accident onshore?**

Answer Yes or No as appropriate and complete only the designated questions.

For onshore pipelines**2 – 5. Accident Location**

Provide the state, zip code, city, and county/parish in which the accident occurred.

6. Operator-Designated Location:

This is intended to be the designation that the operator would use to identify the location of the accident on its pipeline system. Enter the appropriate milepost/valve station or survey station number. This designator is intended to allow PHMSA personnel to both return to the physical location of the accident using the operator's own maps and identification systems as well as to identify the "paper" location of the accident when reviewing operator maps and records.

7. Pipeline/Facility Name

Multiple pipeline systems and/or facilities are often operated by a single operator. This information identifies the particular pipeline system or pipeline facility name commonly used by the operator on which the accident occurred, for example, the "West Line 24" Pipeline", or "Gulf Coast Pipeline", or "Wooster Terminal".

8. Segment name/ID

Within a given pipeline system and/or facility, there are typically multiple segment or station identifiers, names, or ID's which are commonly used by the operator. The information reported here helps locate and/or record the more precise accident location, for example, "Segment 4-32", or "MP 4.5 to Wayne County Line", or "Dublin Pump Station", or "Witte Meter Station".

9. Was the Accident on Federal Lands other than Outer Continental Shelf?

Federal Lands other than Outer Continental Shelf means all lands the United States owns, including military reservations, except lands in National Parks and lands held in trust for Native Americans. Accidents at Federal buildings, such as Federal Court Houses, Custom Houses, and other Federal office buildings and warehouses, are NOT to be reported as being on Federal Lands.

10. Location of Accident

Operator-controlled Property would normally apply to an operator's facility, which may or may not have controlled access, but which is often fenced or otherwise marked with discernible boundaries. This "operator-controlled property" does not refer to the pipeline right-of-way, which is a separate choice for this question.

11. Area of Accident (as found)

Underground means pipe, components or other facilities installed below the natural ground level, road bed, or below the underwater natural bottom.

Under pavement includes under streets, sidewalks, paved roads, driveways and parking lots.

Exposed due to Excavation means that a normally buried pipeline had been exposed by any party (operator, operator's contractor, or third party) preparatory to or as a result of excavation. The cause of the release, however, may or may not necessarily be related to excavation damage. This category could include a corrosion leak not previously evidenced by stained vegetation, but found during an ILI dig, or a release caused by a non-excavation vehicle where contact happened to occur while the pipeline was exposed for a repair or examination. Natural forces might also damage a pipeline that happened to be temporarily exposed. In each case, the cause should be appropriately reported in section G of this form.

Aboveground means pipe, components or other facilities that are above the natural grade.

Typical aboveground facility piping includes any pipe or components installed aboveground such as those at pump stations, valve sites, and breakout tank farms.

Transition area means the junction of differing material or media between pipes, components, or facilities such as those installed at a belowground-aboveground junction (soil/air interface), another environmental interface, or in close contact to supporting elements such as those at water crossings, pump stations and break out tank farms.

12. Did Accident occur in a crossing?

Use **Bridge Crossing** if the pipeline is suspended above a body of water or roadway, railroad right-of-way, etc., either on a separately designed pipeline bridge or as a part of or connected to a road, railroad, or passenger bridge.

Use **Railroad Crossing** or **Road Crossing**, as appropriate, if the pipeline is buried beneath rail bed or road bed.

Use **Water Crossing** if the pipeline is in the water, beneath the water, in contact with the natural ground of the lake bed, etc., or buried beneath the bed of a lake, reservoir, stream or creek, whether the crossing happens to be flowing water at the time of the accident or not. The name of the body of water should be provided if it is commonly known and understood among the local population. (The purpose of this information is to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context. Research to identify names that are not commonly used is not necessary since such names would not fulfill the intended purpose. If a body of water does not have a name that is commonly used and understood in the local area, this field should be left blank).

For **Approximate Water Depth (ft)** of the lake, reservoir, etc., estimate the typical water depth at the location of the accident, allowing for seasonal, weather-related and other factors which may affect the water depth from time to time.

For offshore pipelines

13. Approximate Water Depth (ft.), at the point of the Accident:

This should be the estimated depth from the surface of the water to the seabed at the point of the accident regardless of whether the pipeline is below/on the bottom, underwater but suspended above the bottom, or above the surface (e.g., on a platform).

14. Origin of the Accident

Area and Tract/Block numbers should be provided for either State or OCS waters, whichever is applicable.

For Nearest County/Parish, as with the name of an onshore body of water (see question 12 above), the data collected is intended to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context.

Accordingly, it is not necessary to take measurements to determine which county/parish is "nearest" in cases where the accident location is approximately equidistant from two (or more). In such cases, the name of one of the nearby counties/parishes should be provided.

PART C – ADDITIONAL FACILITY INFORMATION

1. Is the pipeline or facility [Interstate or Intrastate]?

As defined in section 195.2, “**Interstate pipeline** means a pipeline or that part of a pipeline that is used in transportation of hazardous liquids or carbon dioxide in interstate or foreign commerce.”

As defined in section 195.2, “**Intrastate pipeline** means a pipeline or that part of a pipeline to which [part 195] applies that is not an interstate pipeline.

Operators may refer to Appendix A of Part 195 for further guidance.

3. Item involved in Accident

Pipe (whether pipe body or pipe seam) means the pipe through which the commodity is transported, not including auxiliary piping, tubing or instrumentation.

Nominal diameter of pipe is also called **Nominal pipe size**. It is the diameter in whole number inches (except for pipe less than 4”) used to describe the pipe size; for example, 8-5/8 pipe has a nominal pipe size of 8”. Decimals are unnecessary for this measure (except for pipe less than 4”).

Enter **pipe wall thickness** in inches. Wall thickness is typically less than one inch, and is standard among different pipeline types and manufacturers. Accordingly, use three decimal places to report wall thickness: 0.312, 0.281, etc.

SMYS means specified minimum yield strength and is the yield strength prescribed by the specification under which the material is purchased from the manufacturer.

Pipe Specification is the specification to which the pipe was manufactured, such as API 5L or ASTM A106.

Pipe seam means the longitudinal seam (longitudinal weld) created during manufacture of the joint of pipe.

Pipe Seam Type Abbreviations

SAW means submerged arc weld

ERW means electric-resistance weld

DSAW means double submerged arc weld

Auxiliary piping means piping, usually small in diameter that supports the operation of the mainline or facility piping and does not include tubing. Examples of auxiliary piping include discharge and drain lines, sample lines, etc.

If the accident occurred on an item not provided in this section, check the OTHER box and specify in the space provided the item that failed.

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

Mechanical puncture means a puncture of the pipeline, typically by a piece of equipment such as would occur if the pipeline were pierced by directional drilling or a backhoe bucket tooth. Not all excavation-related damage will be a “mechanical puncture.” (Precise

measurement of size – e.g., micrometer – is not needed. Approximate measurements can be provided in inches and one decimal.)

Leak means a failure resulting in an unintentional release of the transported commodity that is often small in size, usually resulting in a low flow release of low volume, although large volume leaks can and do occur on occasion.

Rupture means a loss of containment that immediately impairs the operation of the pipeline. Pipeline ruptures often result in a higher flow release of larger volume. The terms “circumferential” and “longitudinal” refer to the general direction or orientation of the rupture relative the pipe’s axis. They do not exclusively refer to a failure involving a circumferential weld such as a girth weld, or to a failure involving a longitudinal weld such as a pipe seam. (Precise measurement of size – e.g., micrometer – is not needed. Approximate measurements can be provided in inches and one decimal.)

PART D – ADDITIONAL CONSEQUENCE INFORMATION

Per 195.450, High Consequence Area means:

- 1. A *commercially navigable waterway*, which means a waterway where a substantial likelihood of commercial navigation exists;**
- 2. A *high population area*, which means an urbanized area as defined and delineated by the Census Bureau that contains 50,000 or more people and has a population density of at least 1,000 people per square mile;**
- 3. An *other populated area*, which means a place as defined and delineated by the Census Bureau that contains a concentrated population, such as an incorporated or unincorporated city, town, village, or other designated residential or commercial area;**
- 4. An *unusually sensitive area*, as defined in § 195.6**

5.b Estimated amount released in or reaching water

An estimate of the volume released in or reaching water may be based on a variety and/or combination of inputs, including those mentioned above for Part A, Questions 9 and 10.

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

The name of the body of water should be provided if it is commonly known and understood among the local population. (The purpose of this information is to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context. Research to identify names that are not commonly used is not necessary since such names would not fulfill the intended purpose. If a body of water does not have a name that is commonly used and understood in the local area, this field should be left blank).

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?

This question should be answered based on the classification of the involved segment in the operator's integrity management (IM) program at the time of the accident, whether or not consequences to an HCA ensued. It is possible that a release on a pipeline segment that "could affect" an HCA might not actually affect an HCA. It is also possible that releases from segments thought not able to affect an HCA might have such an affect. This could indicate a deficiency in the operator's IM program for identifying segments that can affect HCAs, and all of this information is useful for PHMSA's overall evaluations concerning the efficacy of IM regulation.

7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?

Guidance available from the pipeline industry for its own spill reporting system is pertinent here. Please see <http://committees.api.org/pipeline/ppts/docs/Advisories/2004-1AdvisoryHCAReporting.pdf>

Generally, a spilled commodity will have "reached" an HCA if the spill zone intersects the boundaries of the HCA polygon as mapped by the National Pipeline Mapping System. The HCA maps should be available as a part of each operator's Integrity Management Program as per Part 195.452.

7.a. HCA Type (select all that apply)

Refer to the definitions in 195.450, reproduced above. Leave this question blank if the released commodity did not reach or occur in a High Consequence Area.

8. Estimated cost to Operator:

All relevant costs to the operator must be included on the initial written accident report as well as supplemental reports. This includes (but is not limited to) costs due to property damage to the operator's facilities and to the property of others, commodity lost, facility repair and replacement, and environmental cleanup and damage. Do not report costs incurred for facility repair, replacement, or change that is not related to the accident and done solely for convenience. An example of doing work solely for convenience is working on non-leaking facilities unearthed because of the accident. Litigation and other legal expenses related to the accident are not reportable.

Operators should report costs based on the best estimate available at the time a report is submitted. It is likely that an estimate of final repair costs may not be available when the initial report must be submitted (30 days, per Section 195.54). The best available estimate of these costs should be included in the initial report. For convenience, this estimate can be revised, if needed, when supplemental reports are filed for other reasons, however, when no other changes are forthcoming, supplemental reports should be filed as new cost information becomes available. If supplemental reports are not submitted for other reasons, a supplemental report should be filed for the purpose of correcting the estimated cost if these costs differ from those already reported by 20 percent or \$20,000, whichever is greater.

Public and Non-operator private property damage estimates generally include physical damage to the property of others, the cost of environmental investigation and remediation of a site not owned or operated by the Operator, laboratory costs, third party expenses such as engineers or scientists, and other reasonable costs, excluding litigation and other legal expenses related to the accident.

Paid/reimbursed means that the entity experiencing the property damage was compensated by the operator or operator's representative for the damage or the cost to repair the damage.

Cost of commodity lost includes the cost of the commodity not recovered and/or the cost of recovered commodity downgraded to a lower value or re-processed, and should be based on the volume reported in Part A, Questions 9 and 10.

Operator's property damage estimates generally include physical damage to the property of Operator or Owner Company such as the estimated installed value of the damaged pipe, coating, component, materials or equipment due to the accident, excluding litigation and other legal expenses related to the accident.

When estimating the **Cost of repairs** to company facilities, the standard shall be the cost necessary to safely restore property to its predefined level of service. These costs may include the cost of repair sleeves or clamps, re-routing of piping, or the removal from service of an appurtenance, tank, or pipeline component. When more comprehensive repairs or improvements are justified but not required for continued operation, the cost of such repairs or replacement is not attributable to the accident. Costs associated with improvements to the pipeline to mitigate the risk of future failures are not included.

The following examples are provided for clarity and guidance:

Tank accident - Property damage estimates would include the cost to remove the tank from service, sufficiently clean the tank, repair the tank to a standard operating capability, and then return the tank to service. Costs associated with improvements to the tank to mitigate the risk of future failures are not included.

Pipeline accident - Property damage estimates include the cost to access, excavate and repair the pipeline using methods, materials, and labor necessary to re-establish operations at a predetermined level. Costs associated with improvements to the pipeline to mitigate the risk of future failures are not included.

Estimated costs of **Operator's emergency response** include emergency response operations necessary to return the accident site to a safe state, actions to minimize the volume of commodity released and conduct reconnaissance, and actions to identify the extent of accident impacts and contain, control, mitigate, recover, and remove the commodity from the environment, to the maximum extent practicable. They include materials, supplies, labor, and benefits. Costs related to stakeholder outreach, media response, etc. should not be included. The estimated costs of long-term remediation activities should be included in Environmental Remediation estimates.

Environmental remediation includes the estimated cost to remediate a site such as those associated with engineering, scientists, laboratory costs, installation of long-term recovery

systems, etc. For special considerations related to long-term remediation, see the instructions accompanying Supplemental Report under Part A – General Report Information.

Other costs should not include estimated cost categories separately listed above.

Costs should be reported in only one category and should not be double-counted. Costs can be split between two or more categories when they overlap more than one reporting category.

PART E – ADDITIONAL OPERATING INFORMATION

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?

Consider both voluntary and mandated pressure restrictions. A pressure restriction should be considered mandated by PHMSA or a state regulator if it was directed by an order or other formal correspondence. Pressure reductions imposed by the operator as a result of regulatory requirements, e.g., a pressure reduction taken because an anomaly identified during an IM assessment could not be repaired within the required schedule (195.452(h)(3)), should not be considered mandated by PHMSA.

5.a. Type of upstream valve used to initially isolate release source

Identify the type of valve used to initially isolate the release on the upstream side. In general, this will be the first upstream valve selected by the Operator to minimize the release volume but may not be the closest to the accident site.

5.b. Type of downstream valve used to initially isolate release source

Identify the type of valve used to initially isolate the release on the downstream side. In general, this will be the first downstream valve selected by the Operator to minimize the release volume but may not be the closest to the accident site.

5.c. Length of segment isolated between valves (ft):

Identify the length in feet between the valves identified in item 5.a and 5.b that were initially used to isolate the spill area.

5.f. Function of pipeline system

Gathering means a crude oil pipeline 8 5/8 inches or less nominal outside diameter that transports petroleum from a production facility.

Trunkline/Transmission means all other pipeline assets not meeting the gathering definition.

SMYS means specified minimum yield strength and is the yield strength prescribed by the specification under which the material is purchased from the manufacturer.

Not all rural pipelines or gathering lines operating at less than 20% of SMYS are subject to part 195 safety requirements. Reporting requirements in part 195 subpart B, however, are applicable to all rural low-stress pipelines beginning January 5, 2009 (rule change published in the Federal Register June 3, 2008, 73FR31646). The purpose of this rule change was to allow PHMSA to collect data that might be used to determine whether rural low-stress pipelines and gathering lines not now subject to other regulations should be made subject to them. Low-stress rural pipelines and low-stress rural gathering lines that are not subject to the safety requirements of part 195 are considered unregulated, for purposes of this question, even though accidents on these pipelines are required to be reported.

Accidents reported on “UNregulated” rural low-stress pipelines and “Unregulated” rural low-stress gathering lines must be identified so that the data may be separated out to be used for the purpose intended. Accordingly, for accidents occurring on pipelines operating at less than or equal to 20% SMYS, Operators should indicate whether that pipe is “Regulated” (i.e., subject to all part 195 requirements; this includes pipe in non-rural areas and regulated rural pipelines) or “UNregulated.”

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

This does not mean a system exclusively for leak detection.

6.a. Was it operating at the time of the Accident?

Was the SCADA system in operation at the time of the accident?

6.b. Was it fully functional at the time of the Accident?

Was the SCADA system capable of performing all of its functions, whether or not it was actually in operation at the time of the accident? If no, describe functions that were not operational in the Narrative Part H

6.c and d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection (or confirmation) of the Accident?

Check yes if SCADA-based information was used to confirm the accident even if the initial report or identification may have come from other sources. Use of SCADA data for subsequent estimation of amount of commodity lost, etc. is not considered use to confirm the accident.

Check No if data from SCADA was not used to assist with identification of the accident.

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

This means a system exclusively for leak detection.

Follow instructions for question 6 (SCADA) above,

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

Controller per the definition in API RP 1168 means a qualified individual whose function within a shift is to remotely monitor and/or control the operations of entire or multiple sections of pipeline systems via a SCADA system from a pipeline control room, and who has operational authority and accountability for the daily remote operational functions of pipeline systems.

Local Operating Personnel including contractors means employees or contractors working on behalf of the operator outside the control room.

9. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Accident?

Check only one of the boxes to indicate whether an investigation was/is being conducted (Yes) or was not conducted (No). If an investigation has been completed, select all the factors that apply in describing the results of the investigation.

Cause means an action or lack of action that directly led to or resulted in the pipeline accident.

Contributing factor means an action or lack of action that when added to the existing pipeline circumstances heightened the likelihood of the release and/or added to the impact of the release.

Controller Error means that the controller failed to identify a circumstance indicative of a release event, such as an abnormal operating condition, alarm, pressure drop, change in flow rate, or other similar event.

Incorrect Controller action means that the controller errantly operated the means for controlling an event. Examples include opening or closing the wrong valve, or hitting the wrong switch or button.

PART F – DRUG & ALCOHOL TESTING INFORMATION

Requirements for post-accident drug and alcohol tests are in 49 CFR 199.105 and 225 respectively. If the accident circumstances were such that tests were not required by these sections, and if no tests were conducted, check no. If tests were administered, check yes and report separately the number of operator employees and contractors working for the operator who were tested and who failed.

PART G – APPARENT CAUSE

In PART G – Apparent Cause

Complete only one of the eight sections listed under G1 thru G8

After identifying the main cause category as designated by G1 thru G8, select the one, single sub-cause that best describes the apparent cause of the accident in the shaded column on the left. Answer the corresponding questions that accompany your selected sub-cause, and describe any secondary, contributing, or root causes of the accident in the narrative (PART H).

G1 – Corrosion Failure

Corrosion includes a leak or failure caused by galvanic, atmospheric, stray current, microbiological, or other corrosive action, and, for the purposes of this reporting, includes selective seam corrosion. A corrosion leak is not limited to a hole in the pipe. If the bonnet or packing gland on a valve or flange on piping deteriorates or becomes loose and leaks due to corrosion or failure of bolts, it is classified as Corrosion. (If the bonnet, packing, or other gasket has deteriorated to failure before the end of its expected life but not due to corrosive action, it is classified as an Equipment Failure – G6.)

External Corrosion

4.a. Under cathodic protection means cathodic protection in accordance with Paragraphs 195.563 or 195.573(b). Recognizing that older pipelines may have had cathodic protection added over a number of years, provide an estimate if the exact year cathodic protection started is unknown.

Internal Corrosion**9. Location of corrosion**

A **low point in pipe** includes portions of the pipe contour in which water might settle out. This includes, but is not limited to, the low point of vertical bends at a crossing of a foreign line or road/railroad, etc., an elbow, a drop out or low point drain.

10. Was the commodity treated with corrosion inhibitors or biocides?

Answer yes if corrosion inhibitors or biocides were included in the commodities transported.

12. Were cleaning/dewatering pigs (or other operations) routinely utilized?**13. Were corrosion coupons routinely utilized?**

For purposes of these questions, “routinely” refers to an action that is performed on more than a sporadic or one-time basis as part of a regular program with the intent to ensure that water build-up and/or settling and internal corrosion do not occur.

Either External or Internal Corrosion**14. List the year of the most recent inspections:**

Complete this question only when any corrosion failure sub-cause is selected and the item involved in the accident (as reported in Part C, Question 3) is tank/vessel. Do not complete if the item involved is pipe or weld.

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

Magnetic Flux Leakage Tool is an in-line inspection tool using an imposed magnetic flux to detect instances of pipe wall loss from corrosion. Includes low- and high-resolution MFL tools. Does not include transverse flux MFL tools, which are a separate choice in this question.

Ultrasonic refers to an in-line inspection tool that uses ultrasonic technology to measure wall thickness and detect instances of wall loss.

Transverse Field/Triaxial tools are specialized magnetic flux leakage tools that use a flux oriented to improve ability to detect crack anomalies.

Combination Tool refers to any in-line inspection tool that uses a combination of these inspection technologies in a single tool.

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

Information from the initial post-construction hydrostatic test need not be reported.

17. Has one or more Direct Assessment been conducted on this segment?

This refers to direct assessment as defined in 49 CFR 195.553. Instances in which one or more indirect monitoring tools (e.g., close interval survey, DCVG) have been used that might be used as part of direct assessment but which were not used as part of the direct assessment process defined in 195.553 do not constitute a Direct Assessment for purposes of this question.

G2 – Natural Force Damage

This category includes all outside forces attributable to causes NOT involving humans.

Earth Movement, NOT due to Heavy Rains/Floods refers to accidents caused by land shifts such as earthquakes, subsidence, or landslides, but not mudslides which are presumed to be initiated by heavy rains or floods.

Heavy Rains/Floods refer to all water-related accident causes. While mudslides involve earth movement, report them here since typically they are an effect of heavy rains or floods.

Lightning includes both damage and/or fire caused by a direct lightning strike and damage and/or fire as a secondary effect from a lightning strike in the area. An example of such a secondary effect would be a forest fire started by lightning that results in damage to a

pipeline system asset which results in an accident.

Temperature refers to those causes that are related to ambient temperature effects, either heat or cold, where temperature was the initial cause.

Thermal stress refers to mechanical stress induced in a pipe or component when some or all of its parts are not free to expand or contract in response to changes in temperature.

Frozen components would include accidents where components are inoperable because of freezing and those due to cracking of a piece of equipment due to expansion of water during a freeze cycle.

High Winds includes damage caused by wind-induced forces. Select this category if the damage is due to the force of the wind itself. Damage caused by impact from objects blown by wind would be reported as Section G4, "Other Outside Force Damage."

G3 – Excavation Damage

This section covers damage caused by the operator, operator's contractor, or entities unrelated to the operator during excavation and which results in an immediate release of the transported commodity. For damage from forces OTHER than excavation which results in an immediate release, use "Natural Force Damage", Section G2, or "Other Outside Force Damage", Section G4, as appropriate. For a strike or other damage to a pipeline or facility that results in a later release, report the accident in Section G4 as "Rupture or Failure Due to Previous Mechanical Damage."

Excavation Damage by Operator (First Party)

Check this item if the accident was caused as a result of excavation by a direct employee of the operator.

Excavation Damage by Operator's Contractor (Second Party)

Check this item if the accident was caused as a result of excavation by the operator's contractor or agent or other party working for the operator.

Excavation Damage by Third Party

Check this item if the accident was caused by excavation damage resulting from actions by personnel or other third parties not working for or acting on behalf of the operator or its agent.

Previous Damage due to Excavation Activity

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

Magnetic Flux Leakage Tool is an in-line inspection tool using an imposed magnetic flux to detect instances of pipe wall loss from corrosion. Includes low- and high-resolution MFL

tools. Does not include transverse flux MFL tools, which are a separate choice in this question.

Ultrasonic refers to an in-line inspection tool that uses ultrasonic technology to measure wall thickness and detect instances of wall loss.

Transverse Field/Triaxial tools are specialized magnetic flux leakage tools that use a flux oriented to improve ability to detect crack anomalies.

Combination Tool refers to any in-line inspection tool that uses a combination of these inspection technologies in a single tool.

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

Information from the initial post-construction hydrostatic test need not be reported.

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

This refers to direct assessment as defined in 49 CFR 195.553. Instances in which one or more indirect monitoring tools (e.g., close interval survey, DCVG) have been used that might be used as part of direct assessment but which were not used as part of the direct assessment process defined in 195.553 do not constitute a Direct Assessment for purposes of this question.

7. – 17. Complete these questions for any excavation damage sub-cause. Instructions for answering these questions can be found at CGA's web site, <https://www.damagereporting.org/dr/control/userGuide.do>.

G4 – Other Outside Force Damage

This section covers accidents caused by outside force damage, other than excavation damage or natural forces. Check the most appropriate one sub-cause in this section that applies and answer any accompanying questions.

Nearby Industrial, Man-made or other Fire/Explosion as Primary Cause of Accident applies to situations where the fire occurred before and caused the release. An example of such an accident would be an explosion or fire at a neighboring facility or installation (chemical plant, tank farm, other industrial facility) that results in a release at the operator's facility. (Note that an accident report is required only if the release resulted in reportable consequences, per 195.50). This section should not be used if the release occurred first and then the hydrocarbon ignited. If the fire is known to have been started as a result of a lightning strike, the accident's cause should be classified under Section G2, "Natural Force Damage." Arson events directed at harming the pipeline or the operator should be reported as "Intentional Damage" in this section. Forest fires that are caused by human activity and result in a release should be reported in this section.

Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation. An example of this sub-cause would be a stopple tee that releases commodity when damaged by a pickup truck maneuvering near the pipeline. Other motorized vehicles or equipment include tractors, backhoes, bulldozers and other tracked vehicles, and heavy equipment that can move. Include under this sub-cause accidents caused by vehicles operated by the pipeline operator, the pipeline operator's contractor, or a third party, and specify the vehicle/equipment operator's affiliation. Pipeline accidents resulting from vehicular traffic loading or other contact should also be reported in this category. If the activity that caused the release involved digging, drilling, boring, grading, cultivation or similar activities, report in Section G3, "Excavation Damage".

Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring. This sub-cause includes impacts by maritime equipment or vessels (including their anchors or anchor chains or other attached equipment) that have lost their moorings and are carried into the pipeline facility by the current. This sub-cause also includes maritime equipment or vessels set adrift as a result of severe weather events and carried into the pipeline facility by waves, currents, or high winds. In such cases, also indicate the type of severe weather event. Do not report in this sub-cause accidents which are caused by the impact of maritime equipment or vessels while they are engaged in their normal or routine activities; such accidents should be reported as "Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation" so long as those activities are not excavation activities. If those activities are excavation activities such as dredging or bank stabilization or renewal, the accident should be reported in Section G3, "Excavation Damage".

Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation. This sub-cause includes accidents due to shrimping, purseining, oil drilling, or oilfield workover rigs, including anchor strikes, and other routine or normal maritime-related activities UNLESS the movement of the maritime asset was due to a severe weather event (this type of accident should be reported under "Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring") or the accident was caused by excavation activity such as the **dredging** of waterways or bodies of water (this type of accident should be reported under Section G3, "Excavation Damage").

Previous Mechanical Damage NOT Related to Excavation. This sub-cause covers accidents where damage occurred at some time prior to the release, and would include prior excavation damage, prior outside force damage of an unknown nature, prior natural force damage, and prior damage from other outside forces. Accidents resulting from damage sustained during construction, installation, or fabrication of the pipe or a weld should be reported under Section G5, "Material Failure of Pipe or Weld."

Is there reason to believe that the damage resulted from excavation activity? The answer to this question might come from the condition of the pipe when it is examined or from records of excavation at the site. Dents and gouges in the 10:00-to-2:00 o'clock positions on the pipe, for instance, may indicate an earlier strike, as might marks from the bucket or tracks of an earth moving machine or similar pieces of equipment.

Intentional Damage

Vandalism means willful or malicious destruction of the operator's pipeline facility or equipment. This category would include pranks, systematic damage inflicted to harass the operator, motor vehicle damage that was inflicted intentionally, and a variety of other intentional acts.

Terrorism, per 28 C.F.R. § 0.85 General Functions, includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Operators selecting this item are encouraged to also notify the FBI.

Theft means damage by any individual or entity, by any mechanism, specifically to steal, or attempt to steal, the transported commodity or pipeline equipment.

Other

Describe in the space provided and, if necessary, provide additional explanation in Part H.

G5 – Material Failure of Pipe or Weld

Use this section to report material failures only if “Item Involved in accident” (Part C, Question 3) is “**Pipe**” (whether pipe body or pipe seam) or “**Weld**.”

This section includes leaks, ruptures or other failures from defects within the material of the pipe body or within the pipe seam or other weld due to faulty manufacturing procedures, defects resulting from poor construction/installation/fabrication practices, and in-service stresses such as vibration, fatigue and environmental cracking.

Construction-, Installation-, or Fabrication-related includes leaks in or failures of originally sound material due to force being applied during construction or installation that caused a dent, gouge, excessive stress, or some other defect that eventually failed resulting in an accident. Included are leaks in or failures of wrinkle bends, field welds, and damage sustained in transportation to the construction or fabrication site. Not included are failures due to seam defects.

Original Manufacturing-related (NOT girth weld or other welds formed in the field) means an inherent flaw in the material or weld that occurred in the manufacture or at a point prior to construction, fabrication or installation. Therefore, this option is not appropriate for wrinkle bends, field welds, girth welds, or other joints fabricated in the field. Use this option for failures such as those due to defects of the longitudinal weld or inclusions in the pipe body.

If **Construction, Installation, Fabrication-related** or **Original Manufacturing-related** is selected, then select the failure mechanism.

Examples of Mechanical Stress include failures related to overburden or loss of support.

G6 – Equipment Failure

This section applies to failures of items **other than** Pipe Body, Pipe Seam, or Welds.

Malfunction of Control/Relief Equipment

Examples of this type of accident cause include: overpressurization resulting from malfunction of a control or alarm device; relief valve malfunction; valves failing to open or close on command; or valves which opened or closed when not commanded to do so. If overpressurization or some other aspect of this accident was caused by incorrect operation, the accident should be reported under Section G7, “Incorrect Operation.”

ESD System Failure means failure of an emergency shutdown system.

G7 – Incorrect Operation

These types of accidents most often occur during operating, maintenance, or repair activities. Some examples of this type of accident are tank overfills, improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment. The unintentional ignition of the transported commodity during a welding or maintenance activity would also be included in this sub-cause. These types of accidents often involve training or judgment errors.

G8 – Other Accident Cause

This section is provided for accident causes that do not fit in any of the main cause categories listed in Sections G1 through G7.

If the accident cause is known but doesn't fit in any category in Sections G1 through G7, check the **Miscellaneous** box and enter a description of the accident and continue in Part H - Narrative Description of the Accident, if more space is needed.

If the accident cause is unknown at the time of filing this report, check the **Unknown** box in this section and select one reason from the accompanying two choices. If the investigation is not completed and the cause of the incident is thus still to be determined, file a supplemental report once the investigation is completed to report the apparent cause.

PART H – NARRATIVE DESCRIPTION OF THE ACCIDENT

(Attach additional sheets as necessary)

Concisely describe the accident, including the facts, circumstances, and conditions that may have contributed directly or indirectly to causing the accident. Include secondary and contributing causes when possible, or any other factors associated with the cause that are

deemed pertinent. Use this section to clarify or explain unusual conditions, to provide sketches or drawings, and to explain any estimated data. Operators submitting reports on-line will be afforded the opportunity to attach/upload files containing sketches, drawings, or additional data.

If you checked the Miscellaneous block in Section G8, the narrative should describe the accident in detail, including all known or suspected causes and possible contributing factors.

Operators should use the narrative to describe any secondary causes that they consider important but which could not be reported in section G since only the primary cause is reported there.

PART I – PREPARER AND AUTHORIZED SIGNATURE

The Preparer is the person who compiled the data and prepared the responses to the report and who is to be contacted for more information (preferably the person most knowledgeable about the information in the report or who knows how to contact the person most knowledgeable). Please enter the Preparer's e-mail address if the Preparer has one, and the phone and fax numbers used by the Preparer.

An Authorized Signature must be obtained from an officer, manager, or other person whom the operator has designated to review and approve (and sign and date) the report. This individual is responsible for assuring the accuracy and completeness of the reported data. In addition to their title, a phone number and email address are to be provided for the individual signing as the Authorized Signature.

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FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

*24 Hour Number

FACILITY RESPONSE TEAM		
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)
Pat Wisdom Operations Manager	(903) 758-5892 (Office) (903) 475-3407 *(Mobile)	1
Shane Weems	(903) 758-5892 (Office) (903) 576-4095 *(Mobile)	1
Shane Millet	(903) 261-3476 (Office) (903) 261-3476 *(Mobile)	1
Jimmy Woods Operations Supervisor	(806) 934-7518 (Office) (806) 717-8090 *(Mobile)	1
Ray Cecil Maintenance Supervisor	(806) 934-7510, (806) 935-7799 (Office) (b) (6) (806) 681-5820, (806) 930-6125 * (Mobile)	1
Jerry Potter Health & Safety Coordinator	(806) 935-6385 (Office) (806) 886-1151 *(Mobile)	1
Scott Richardson Senior Tech	(903) 236-9288 (Office) (b) (6) (903) 576-3706 *(Mobile)	1
Frank DeLao Operations Manager	(432) 684-4302 (Office) (432) 301-3724 *(Mobile)	1

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

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

*24 Hour Number

EMERGENCY RESPONSE PERSONNEL						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	RESPONSIBILITY DURING RESPONSE ACTION	RESPONSE TRAINING TYPE ¹		
				1	2	3
Tim Moore VP Crude Operations	(918) 513-2707 (Office) (918) 513-2929 *(Mobile)		Logistics & Finance			
Dale Hanzlicek Corporate H&S Manager	(316) 804-4240 (Office) (316) 207-8636 *(Mobile)		Safety Leader			
Myron Klassen Engineering Manager	(316) 425-0936 (Office) (316) 841-0674 *(Mobile)					
Ronald Shiver Environmental Manager	(512) 904-0788 (Office) (512) 751-0969 *(Mobile)		Environmental Leader, Liaison Officer			
Bob Aebi DOT Compliance Manager	(580) 395-2308 (Office) (580) 395-2227 *(Mobile)					
EMERGENCY RESPONSE TRAINING TYPE¹						
There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.						
TYPE	DESCRIPTION					
1	29 CFR 1910.120 HAZWOPER					
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, IMT, QI Components					
3	Qualified Individual/Incident Command Training					

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FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24 Hour Number

EMERGENCY RESPONSE CONTRACTORS			
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	RESPONSIBILITY DURING RESPONSE ACTION
Garner Environmental Services Deer Park, TX	(800) 442-7637 (281) 930-1200	6	
Oil Mop Environmental Services, Inc. Pasadena, TX	(800) 645-6671	6	
Talon LPE Midland, TX	(866) 742-0742* (432) 522-2133 (432) 522-2180	6	

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FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

***24 Hour Number**

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Initial		
NONE County		
National Response Center (NRC)	(800) 424-8802* (202) 267-2675*	
Recommended		
U.S. EPA Region VI 1445 Ross Avenue, 12th Floor, Dallas, TX 75202, Don Smith, Federal OSC	(866) 372-7745* (800) 877-6063 (214) 665-6489 (214) 665-6444	
Railroad Commission of Texas Oil and Gas Division - District 8	(432) 684-5581	
Railroad Commission of Texas Oil and Gas Division District 3	(713) 869-5001	
Railroad Commission of Texas Oil and Gas Division District 6	(903) 984-3026	
Texas Commission on Environmental Quality ? Emergency Response	(800) 832-8224*	
Texas Department of Public Safety - Governor's Division of Emergency Management	(512) 424-2138 (duty hours) (512) 424-2000 (non-duty hours) (512) 424-2444 (fax)	
Texas Department of Public Safety (Midland)	(432) 498-2366	
Texas Department of Public Safety (Midland)	(432) 498-2366	
Texas Department of State Health Services (Midland)	(432) 683-9492	
Texas Department of State Health Services Region 4/5 North (Tyler)	(903) 595-3585	
Texas Department of State Health Services Region 6/5 South (Houston)	(713) 767-3000 (713) 767-3049 (fax)	
Texas Parks and Wildlife	(800) 792-1112	
Texas Railroad Commission ? District 10	(806) 665-1653	
Anderson County		
Anderson County Fire Marshal	(903) 731-8463	
Jacksonville Fire Department	(903) 586-6600	
East Texas Medical Center	(903) 541-5000	
Jacksonville Police Department	(903) 586-2548	

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
Anderson County		
Anderson County LEPC	(903) 723-7812	
Brazoria County		
Brazoria County Sheriff	281-333-9000	
Brazoria County LEPC	979-864-1801	
Camp County		
Camp County Sheriff	903-856-6861	
Camp County LEPC	903-856-2097	
Cherokee County		
Cherokee County LEPC	903-683-5416	
Fort Bend County		
Richmond EMS	281-342-2100	
Richmond Fire Department	281-311-1828	
Fort Bend County Sheriff	281-342-6266 281-342-6116	
Richmond Police	281-342-2849	
Fort Bend County LEPC	281-961-1380	
Franklin County		
Franklin County LEPC	903-537-2342	
Galveston County		
Galveston County Sheriff	409-768-2222	
Galveston County & Unincorporated LEPC	281-377-3100 800-393-0203	
Galveston-Texas City/La Marque LEPC	409-643-5840	
Gregg County		
Fire Department (Bateman)	(903) 984-3874	
Longview Fire Department	(903) 237-1213	
Hospital (Bateman)	(903) 657-0326	

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

***24 Hour Number**

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
Gregg County		
Longview Regional Medical Center	(903) 758-1818	
Mother Frances Hospital	(903) 984-2200	
City/County Police Department (Longview)	(903) 237-1199	
Gregg County Sheriff	903-236-8400	
Police Department (Bateman)	(903) 983-1559	
Gregg County LEPC	(903) 234-3144	
Harris County		
Webster EMS	281-332-3133	
Friendswood Fire Dept.	281-996-3300	
Webster Fire Dept.	281-332-3133	
Memorial Hermann Southwest	281-929-6100	
Friendswood Police	281-996-3300	
Harris County Sheriff	(281) 221-8000 911*	
Webster Police Dept.	281-332-2426	
Baytown LEPC	281-420-6556	
Bellaire LEPC	713-662-8206	
City of Houston LEPC	713-589-1036	
Deer Park LEPC	281-478-7248	
Galena Park LEPC	713-675-3471	

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

***24 Hour Number**

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
Harris County		
Harris County Unincorporated LEPC	281-320-9105	
Humble LEPC	281-446-4928	
Jacinto City LEPC	713-674-8424	
Jersey Village LEPC	713-446-2131	
Katy LEPC	281-391-4848	
LaPorte LEPC	281-471-3607	
Memorial Villages LEPC	713-468-7941	
North Channel Area LEPC	713-455-5372	
South Houston LEPC	713-941-0907	
Southeast Regional LEPC	713-473-7646	
Tomball LEPC	281-351-7101	
West University LEPC	713-662-5836	
Midland County		
Midland Fire Department	(432) 685-7332	
Midland Memorial Hospital	(432) 685-1111	
Midland County Sheriff Department	(432) 688-4600	
Midland County LEPC	(432) 688-4160	
Moore County		
Dumas Fire Department	(806) 935-6434 Non-Emergency 911*	
Moore County Hospital District	(806) 935-7171	

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
Moore County		
Police Department (Dumas)	(806) 935-3158	
Local Emergency Planning Committee (LEPC) ? Moore County	(806) 934-9520	
Potter County		
Fire Department (Masterson)	(806) 935-6434	
Hospital (Masterson)	(806) 935-7171	
Police Department (Masterson)	(806) 935-3998	
Potter County LEPC	(806) 378-3004	
Rusk County		
Arp Fire Department	(903) 859-5232	
Henderson Memorial Hospital	(903) 657-7541	
Police Department (Arp)	(903) 859-6042	
Rusk County LEPC	(903) 657-0326	
Smith County		
Tyler Medical Center	903-597-0351	
Smity County Sheriff	903-769-2288	
Tyler Highway Patrol	903-566-4801	
Smith County LEPC	903-535-0965	
Titus County		
Talco Fire Department	(903) 379-3331	
Titus Regional Medical Center	(903) 577-6000	
Bogata Police Department	(903) 632-4619	
Titus County LEPC	(903) 577-6794	

FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
Upshur County		
Upshur County Sheriff	(903) 856-6651	
Upshur County LEPC	903-843-4003	
Wood County		
Wood County Ambulance	911 (903) 597-2011	
Hawkins Fire Dept.	(903) 769-2801 (903) 769-2224	
E.T. Medical Center	903-597-0351	
Police Department (Hawkins)	(903) 769-2801	
Wood County Sheriff	903-763-2201	
Wood County LEPC	(903) 769-5363 (903) 763-2356	

Texas Zone

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FIGURE 3.1-3 - NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Numbers are provided for reference. Not all agencies are required be contacted during an event.

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended , Continued		
USCG CLASSIFIED OSRO		
Garner Environmental Services Deer Park , TX	(800) 442-7637 (281) 930-1200	
Oil Mop Environmental Services, Inc. Pasadena , TX	(800) 645-6671	
NON USCG CLASSIFIED OSRO		
Talon LPE Midland , TX	(866) 742-0742* (432) 522-2133 (432) 522-2180	
Aviation Companies		
MEW Pipeline Patrol	(903) 665-7248 Cell (903) 930-6344	
Service Providers		
Brentco Aerial Patrol	(330) 316-5080	

SECTION 4

Last revised: July 2011

RESPONSE TEAM ORGANIZATION4.1 Description4.2 Activation Procedures4.3 Incident Management System / Unified Command4.4 Qualified Individual (QI)

Figure 4.4-1 - Incident Management Team (IMT)
Activation Procedure

Figure 4.4-2 - Incident Management Team (IMT)
Organization Chart

4.5 Incident Management Team (IMT) Job Descriptions and
Guidelines

4.1 DESCRIPTION

The Incident Management Team (IMT) has been created and organized to plan for and manage emergencies. The IMT is composed of Company personnel from offices within the Area. Additional personnel from outlying offices as well as contract personnel can be used (if needed). The IMT will develop strategies and priorities for a response, then will supervise contractors, handle safety and security matters, and will provide logistical support for contractor personnel. The IMT will handle all communications with the media and the public. Job descriptions for each IMT member are provided in **SECTION 4.5**. The IMT will train by participating in exercises as noted in APPENDIX A.

4.2 ACTIVATION PROCEDURES

Activation of the IMT may be accomplished in stages. Initially, the First Responder assumes the role of Incident Commander (IC). During a spill incident, the initial IC may be able to respond without assistance from the IMT. If the situation requires more resources, he may request additional personnel or management support from the IMT. This request is made to the Qualified Individual (QI). Depending on the situation, the QI may then assume the role of Incident Commander. The QI would then call out the other IMT members. The IMT activation procedure is provided in FIGURE 4.4-1.

4.3 INCIDENT MANAGEMENT SYSTEM / UNIFIED COMMAND

The Incident Management System (IMS) will be used by the Company IMT for spill response. The IMT organization chart is provided in FIGURE 4.4-2. The organization can be expanded or contracted as necessary.

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

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

These three people share decision-making authority within the Incident Management System and are each responsible for coordinating other federal, state, and company personnel to form an effective integrated Incident Management Team. Refer to **SECTION 4.5** for detailed checklists of the IMT roles and responsibilities as well as organizational interfaces with external parties.

4.4 QUALIFIED INDIVIDUAL (QI)

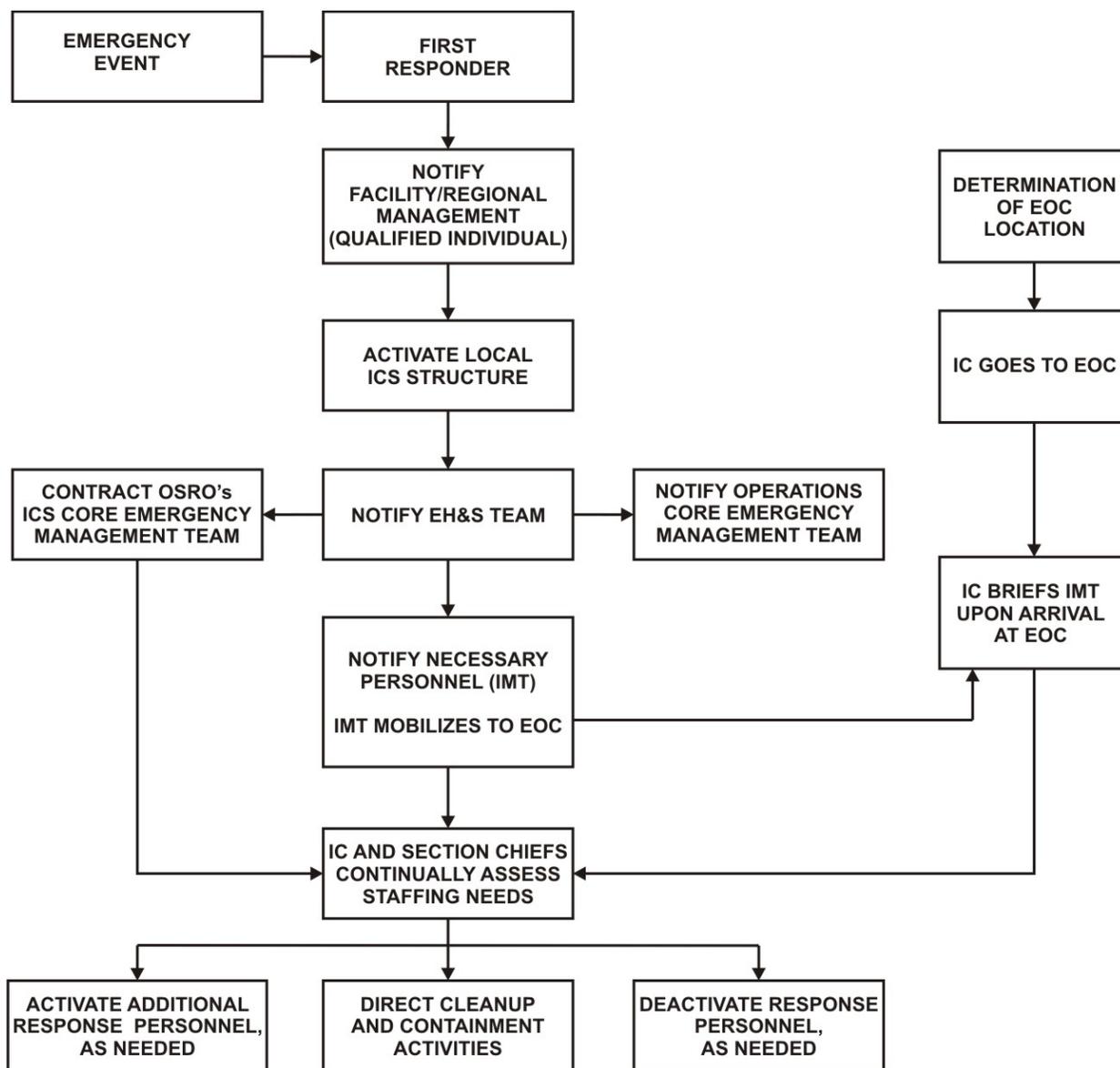
The Qualified Individual (QI) is an English-speaking representative, available on a 24-

hour basis, and trained in the responsibilities outlined in this section. The QI has the following responsibilities and authorities as required by the Oil Pollution Act of 1990 (OPA 90):

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

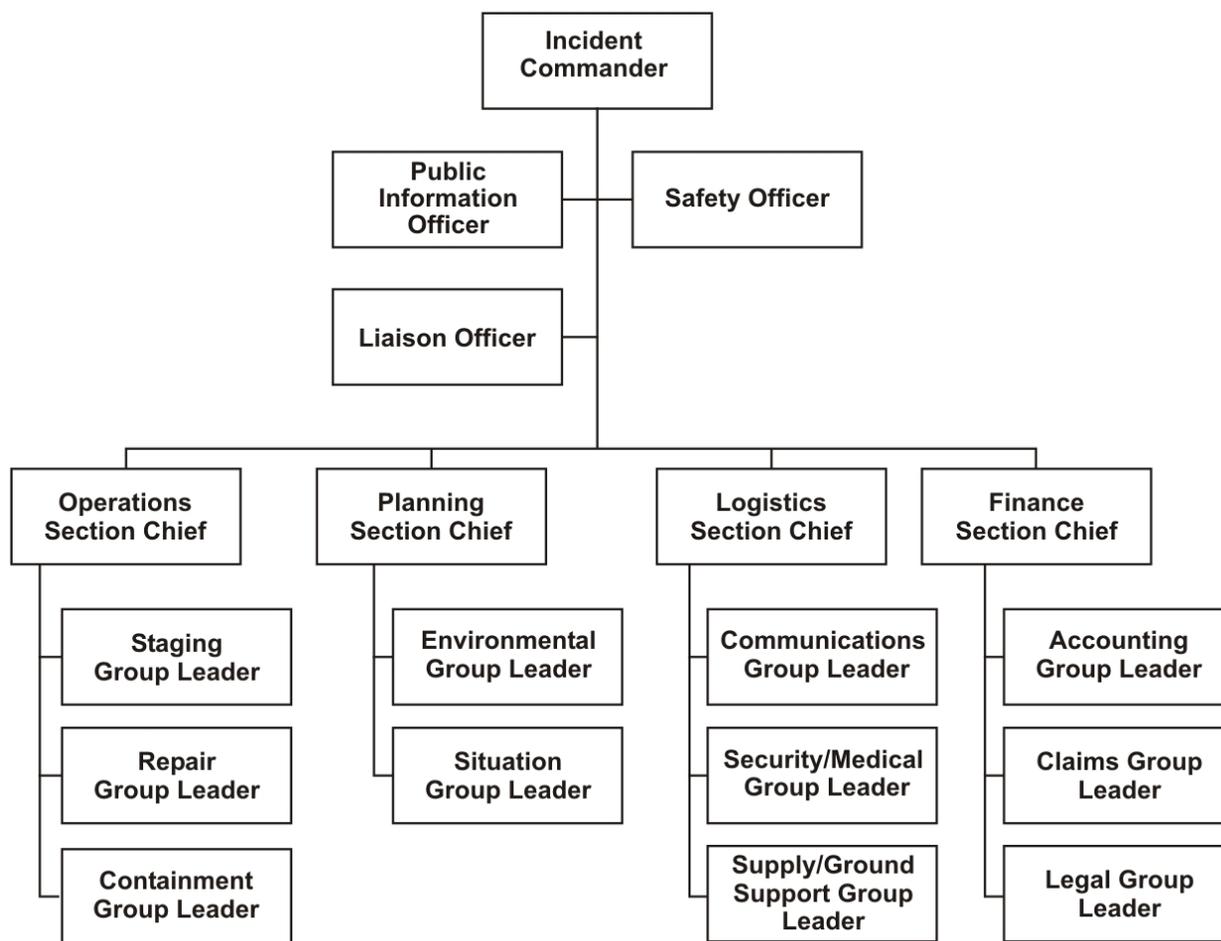
For further information on Qualified Individual's training, refer to **APPENDIX A**. Phone numbers for Qualified Individuals are provided in **FIGURE 3.1-3**.

FIGURE 4.4-1 - INCIDENT MANAGEMENT TEAM (IMT) ACTIVATION PROCEDURE



CC - Command Center
 IC - Incident Commander
 IMT - Incident Management Team
 QI - Qualified Individual

FIGURE 4.4-2 - INCIDENT MANAGEMENT TEAM (IMT) ORGANIZATION CHART



4.5 INCIDENT MANAGEMENT TEAM (IMT) JOB DESCRIPTIONS AND GUIDELINES

The following job descriptions and guidelines are intended to be used as a tool to assist IMT members in their particular positions within the Incident Management System (IMS). One individual may serve several different roles. Similarly, a role may be shared by one or more individuals. Depending on the size and severity of the incident, the facility may rely on its contracted OSRO to fulfill the IMT roles. **FIGURE 3.1-3** identifies the name and contact number for OSRO providing Spill/Emergency Management Team Services. A detailed list of OSRO resources/services can be found in **APPENDIX B**.

- Incident Commander
- Public Information Officer
- Liaison Officer
- Safety Officer
- Operations Section Chief
- Staging Group Leader
- Repair Group Leader
- Containment Group Leader
- Planning Section Chief
- Environmental Group Leader

- Situation Group Leader
- Documentation Group Leader
- Demobilization Leader
- Resources Unit Leader
- Logistics Section Chief
- Communications Group Leader
- Security/Medical Group Leader
- Supply/Ground Support Group Leader
- Service Branch
- Food Unit
- Finance Section Chief
- Accounting Group Leader
- Claims Group Leader
- Legal Group Leader

INCIDENT COMMANDER

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

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

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

Responsibilities:

- Maintain Activity Log.
- Establish Incident Command/Unified Command Post.
- Activate necessary section(s) of the Incident Management System (IMS) to deal with the emergency. Fill out the appropriate section(s) of the Incident Command organization chart and post it at the Incident Command Center.
- Develop goals and objectives for response.

- Work with Safety Officer and Planning Section Chief to develop a Site Safety Plan (SSP).
- Approve, authorize, and distribute Incident Action Plan (IAP) and SSP.
- Conduct planning meetings and briefings with the section chiefs.
- As Qualified Individual coordinate actions with Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC).
- In a multi-jurisdictional response, ensure that all agencies are represented in the IMS.
- Coordinate and approve media information releases with the FOSC, SOSC, and Public Information Officer (PIO).
- Keep management informed of developments and progress.
- Authorize demobilization of resources as they are no longer needed.
- Complete Standard Incident Debriefing Form (**FIGURE 8.3-1**).

PUBLIC INFORMATION OFFICER

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

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

Responsibilities:

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

- Participate in Post-Incident Review (**SECTION 8.3**)

LIAISON OFFICER

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

Responsibilities:

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

SAFETY OFFICER

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

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Incident Commander (IC).
- Develop, implement, and disseminate SSP with IC and section chiefs.
- Participate in planning meetings and briefings.
- Establish safety staff if necessary.
- Identify emergency contact numbers. Fill out emergency contact chart and post in the Incident Command Center.
- Conduct safety briefings with all emergency responders.
- Investigate accidents that have occurred during emergency response.
- Ensure proper hazard zones are established.

- Ensure all emergency responders have appropriate level of training.
- Ensure proper Personal Protective Equipment (PPE) is available and used.
- Advise Security/Medical Group Leader concerning PPE requirements.
- Ensure emergency alarms/warning systems are in place as needed.
- Participate in Post-Incident Review (**SECTION 8.3**).

OPERATIONS SECTION CHIEF

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

Responsibilities:

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

STAGING GROUP LEADER

The Staging Group Leader is responsible for managing all activities within the staging area(s). The Staging Group Leader will collect, organize, and allocate resources to the various response locations as directed by Operations Section Chief.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Operations Section Chief.
- Participate in Operations' planning meetings and briefings.
- Advise Operations Section Chief of equipment location and operational status.
- Periodically advise Operations Section Chief on inventory status of consumable items (sorberent pads, sorberent boom, etc.).
- Coordinate with Logistics Section Chief regarding inbound equipment, personnel, and supplies.
- Participate in development of Operations' portion of Incident Action Plan (IAP).
- Establish check-in function and inventory control as appropriate.
- Allocate personnel/equipment to site(s) as requested.
- Establish and maintain boundaries of staging area(s).
- Demobilize/relocate staging area as needed.
- Post signs for identification and traffic control.
- Participate in Post-Incident Review (**SECTION 8.3**)

REPAIR GROUP LEADER

The Repair Group Leader is responsible for supervising the repair and restoration of pipeline facilities.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Operations Section Chief.
- Periodically advise Operations Section Chief on status of restoration activities.
- Conduct frequent hazard assessments and coordinate safety needs with Operations Section Chief and Safety Officer.
- Participate in Operations' planning meetings and briefings.
- Participate in development of Operations' portion of Incident Action Plan (IAP).
- Conduct facility restoration activities in accordance with Company procedures, Site Safety Plan (SSP) and IAP.
- Determine and request additional materials, equipment and personnel as needed.
- Ensure all equipment is decontaminated prior to being released.
- Participate in Post-Incident Review (**SECTION 8.3**).

CONTAINMENT GROUP LEADER

The Containment Group Leader is responsible for supervising the containment and recovery of spilled product and contaminated environmental media both on land and on water.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Operations Section Chief.
- Participate in Operations' planning meetings and briefings.
- Participate in development of Operations' portion of Incident Action Plan (IAP).
- Conduct activities in accordance with the IAP.
- Assess overall situation for containment and recovery needs and supervise group activities.
- Periodically advise the Operations Section Chief on the status of containment and recovery actions.
- Ensure hazard zones are established and maintained.
- Ensure adequate communication equipment for the containment group response.
- Determine and request additional resources as needed.
- Participate in Post-Incident Review (**SECTION 8.3**).

PLANNING SECTION CHIEF

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

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

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from the IC.
- Establish and maintain communication with IC and other Section Chiefs.
- Advise IC on any significant changes of incident status.
- Conduct planning meetings and briefings for Planning section.

- Coordinate and provide input to the preparation of the Incident Action Plan (IAP).
- Participate in Incident Command planning meetings and briefings.
- In a multi-jurisdictional response, ensure that all agencies are represented in the Planning Section.
- Coordinate future needs for the emergency response.
- Determine response personnel needs.
- Determine personnel needs and request personnel for Planning section.
- Assign technical specialists (archaeologists, historians, biologists, etc.) where needed.
- Collect and analyze information on the situation.
- Assemble information on alternative response and cleanup strategies.
- Ensure situation status unit has a current organization chart of the Incident Command Organization.
- Provide periodic spill movement/migration prediction.
- Participate in Post Incident Review (**SECTION 8.3**).

ENVIRONMENTAL GROUP LEADER

The Environmental Group Leader is responsible for ensuring that all areas impacted by the release are identified and cleaned up following company and regulatory standards. The Environmental Group Leader supports Planning and Operations to minimize and document the environmental impact of the release. The Environmental Group Leader must plan for future site considerations such as long-term remediation and alternative response strategies in unusually sensitive areas. In a Unified Command Structure (UCS), representatives from the federal and state responding agencies will be included in this group.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from the Planning Section Chief.
- Participate in Planning section meetings and briefings.
- Participate in development of Planning's portion of Incident Action Plan (IAP).
- Coordinate environmental activities with responding regulatory agencies.
- Periodically advise the Planning Section Chief on status of group activities.
- Request additional personnel/specialists to support response effort.
- Determine environmental group resource needs.
- Identify and develop a prioritized list of natural, cultural and economic (NCE) resources at risk.

- Initiate and coordinate Natural Resources Damage Assessment (NRDA) activities.
- Develop a management plan for recovered contaminated media and ensure coordination with Containment Group Leader.
- Ensure proper management of injured/oiled wildlife.
- Determine alternative cleanup strategies for response.
- Participate in Post-Incident Review (**SECTION 8.3**).

SITUATION GROUP LEADER

The Situation Group Leader is responsible for the collection, evaluation, display, and dissemination of all information related to the emergency response effort. The Situation Group Leader must establish and maintain communications with all portions of the Incident Command and the response site in order to collect the information. The Situation Group Leader also attempts to predict spill movement/migration and identifies areas that may be impacted by the emergency.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from the Planning Section Chief.
- Participate in Planning section meetings and briefings.
- Participate in development of Planning's portion of Incident Action Plan (IAP).
- Maintain a master list of response resources ordered, in staging and in use.
- Collect and display current status of requested response resources.
- Collect and display current status of resources, current spill location, personnel and weather.
- Analyze current information to determine spill trajectory and potential impacts.
- Disseminate information concerning the situation status upon request from the emergency responders.
- Provide photographic services and maps.
- Establish periodic reconnaissance of impacted area to support information needs.
- Collect information on the status of the implementation of Incident Action Plans. Display this information in the Incident Command Center.
- Participate in Post Incident Review (**SECTION 8.3**).

DOCUMENTATION GROUP LEADER

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

Responsibilities:

- Review Common Responsibilities.
- Review Unit Leader Responsibilities.
- Obtain briefing and special instructions from Planning Section Chief.
- Participate in Planning Meetings as required.
- Establish and organize incident files.
- Establish duplication service and respond to requests.
- File copies of all official forms and reports.
- Check on accuracy and completeness of records submitted for files and correct errors or omissions by contacting appropriate ICS units.
- Provide incident documentation to appropriate requesters.

DEMOBILIZATION LEADER**Responsibilities:**

- Reviews incident resource records to determine size of demobilization effort and evaluate logistics and transportation capabilities required to support demobilization.
- Prepares and obtain approval of Demobilization Plan. In cooperation with the logistics section, provide plans for the orderly decontamination of excess and surplus equipment. Distribute Demobilization Plan to each processing point.
- Monitors implementation and assist in coordinating the Demobilization Plan. Provide for the orderly demobilization of response resources as soon as they become surplus.
- Obtains briefing and special instructions from Planning Section Chief and participate in planning meetings as required.
- Provides status reports to appropriate requesters.
- Ensures the Demobilization Check-Out form (ICS 221) is prepared and completed forms are returned for filing.
- Maintain Unit's Records and Unit/Activity Log (ICS 214) or (ICS 214a).

RESOURCE UNIT LEADER

Responsibilities:

- Maintains the status of all primary and support resources at an incident by developing and maintaining a master list of all resources, including check-in, status, current location, etc.
- Using the Incident Briefing (ICS 201) prepares and maintains the Incident Situation Display.
- Establishes contact with incident facilities to track resource status.
- Gathers, posts, and maintains incident resource status and provides status reports upon request.
- Maintains master roster of all resources checked in at the incident.
- Prepares Organizational Assignment List (ICS 203) including appropriate parts of Assignment Lists (ICS 204, ICS 204a) and Organizational Chart (ICS 207).
- Obtains briefing and special instructions from Planning Section Chief and participate in planning meetings as required.
- Maintain Unit's Records and Unit/Activity Log (ICS 214) or (ICS 214a).

LOGISTICS SECTION CHIEF

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

Responsibilities:

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

COMMUNICATIONS GROUP LEADER

The Communications Group Leader is responsible for ensuring that the Incident Command and emergency responders have reliable and effective means of communication. This may involve activation of multiple types of communications equipment and coordination among multiple responding agencies and contractors.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Logistics Section Chief.
- Periodically advise Logistics Section Chief on status of communications group.
- Participate in Logistics section planning meetings and briefings.
- Participate in development of Logistics' portion of Incident Action Plan (IAP).
- Establish an Incident Command communications center.
- Ensure Incident Commander (IC) has communications compatible with other response agencies.
- Identify all communications circuits/equipment used by emergency responders and keep a chart updated with this information.
- Determine the type and amount of communications required to support the response effort (computer, radio, telephone, fax, etc.).
- Ensure timely establishment of adequate communications equipment and systems.
- Advise Logistics Section Chief on communications capabilities/limitations.
- Establish an equipment inventory control system for communications gear.
- Ensure all equipment is tested and repaired.
- Participate in Post-Incident Review (**SECTION 8.3**).

SECURITY/MEDICAL GROUP LEADER

The Security/Medical Group Leader is responsible for developing a plan to deal with medical emergencies, obtaining medical aid and transportation for emergency response personnel, and preparation of reports and records.

The Security/Medical Group Leader is responsible for providing safeguards needed to protect personnel and property from loss or damage. The Security/Medical Group Leader also controls access to the emergency site and Incident Command Center.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Logistics Section Chief.
- Periodically advise Logistics Section Chief on the status of security and

medical problems.

- Participate in Logistics meetings and briefings.
- Participate in development of Logistics' portion of Incident Action Plan (IAP).
- Determine and develop security/medical support plan needs.
- Request medical or security personnel, as needed.
- Work with Safety Officer to identify/coordinate local emergency medical services.
- Coordinate with Safety Officer and Operations Section Chief to establish the Site Safety Plan (SSP) with site boundaries, hazard zones, escape routes, staging areas, command Center and Personal Protective Equipment (PPE) requirements.
- Coordinate/develop an identification system in order to control access to the incident site.
- Participate in Post Incident Review (**SECTION 8.3**).

SUPPLY/GROUND SUPPORT GROUP LEADER

The Supply/Ground Support Group Leader is responsible for procurement and the disposition of personnel, equipment and supplies; receiving and storing all supplies for the incident; maintaining an inventory of supplies; and servicing non-expendable supplies and equipment. The Supply/Ground Support Group Leader supports the following: transportation of personnel; supplies, food, equipment; and fueling, service, maintenance and repair of vehicles and equipment.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Logistics Section Chief.
- Periodically advise Logistics Section Chief on status of supply/ground support group.
- Participate in Logistics meetings and briefings.
- Participate in development of Logistics' portion of Incident Action Plan (IAP).
- Communicate with Staging Group Leader concerning material, equipment and personnel that are inbound and the approximate time of arrival.
- Coordinate with other Section Chiefs to ascertain the priority of needed materials, equipment and services.
- Coordinate with Finance Section Chief to establish accounts, purchase orders, AFEs and procedures as necessary.
- Establish an inventory control system for materials and equipment.
- Maintain roads, when necessary.
- Participate in Post-Incident Review (**SECTION 8.3**).

SERVICE BRANCH

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

Responsibilities:

- Review Common Responsibilities.
- Obtain working materials form Logistics Kit.
- Determine level of service required to support operations.
- Confirm dispatch of Branch personnel.
- Participate in planning meeting of Logistics Section Personnel.
- Review Incident Action Plan.
- Coordinate activities of Service Branch Units.
- Inform Logistics Section Chief of activities.
- Resolve Service Branch problems.
- Maintain Unit/Activity Log (**ICS 214, SECTION 5.2**).

FOOD UNIT

Responsibilities:

- Provide and coordinate meals and subsistence support to response personnel.
- Plan, document and account for the number of meals required.
- Establish kitchens, galleys, canteens, and other food service support.
- Establish and manage sources of supply to support meals and subsistence requirements.
- Provide potable drinking water, coolers, and other beverages required to support response operations.
- Identify resources and support needs.
- Develop the Incident Meal/feeding Plan (ICS 215b).
- Maintain Unit's Records and Unit/Activity Log (ICS 214) or (ICS 214a).

FINANCE SECTION CHIEF

The Finance Section Chief is responsible for accounting, legal, right-of-way and risk management functions that support the emergency response effort. In this role, the

primary responsibility is supporting the Command Staff and Logistics Section matters pertaining to expenses during and following the emergency response.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Incident Commander (IC).
- Participate in Incident Command planning meetings and briefings.
- Conduct planning meetings and briefings for Finance section.
- Participate in preparation of the Incident Action Plan (IAP).
- Participate in planning meetings.
- Participate in Unified Command System (UCS) as incident warrants.
- Request assistance of corporate accounting, legal, right-of-way or risk management as needed.
- Assist with contracting administration.
- Participate in Post-Incident Review (**SECTION 8.3**).

ACCOUNTING GROUP LEADER

The Accounting Group Leader is responsible for accumulating and dispensing funding during an emergency response. All charges directly attributed to the incident should be accounted for in the proper charge areas.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Finance Section Chief.
- Periodically advise Finance Section Chief.
- Participate in Finance planning meetings and briefings.
- Participate in development of Finance's portion of Incident Action Plan (IAP).
- Make recommendations for cost savings to Finance and Logistics Section Chiefs.
- Establish accounts as necessary to support the Logistics section.
- Ensure all invoices are documented, verified, and paid accordingly.
- Involve corporate accounting group for assistance as necessary.
- Participate in Post-Incident Review (**SECTION 8.3**).

CLAIMS GROUP LEADER

The Claims Group Leader is responsible for managing all risk management and right-

of-way issues at, during, and following an emergency response. It is important that all claims are investigated and handled expediently.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Finance Section Chief.
- Participate in Finance planning meetings and briefings.
- Participate in development of Finance's portion of Incident Action Plan (IAP).
- Periodically inform affected parties of status of emergency response.
- Review and authorize payment of all claims.
- Provide needs of evacuated persons or groups.
- Purchase or acquire property.
- Inform and update necessary insurance groups and underwriters.
- Involve corporate Risk Management or Land, Records, and Claims as needed.
- Participate in Post-Incident Review (**SECTION 8.3**).

LEGAL GROUP LEADER

The Legal Group Leader is responsible for advising the Incident Command Staff and Section Chiefs on all matters that may involve legal issues.

Responsibilities:

- Maintain Activity Log.
- Obtain briefing from Finance Section Chief.
- Periodically advise Finance Section Chief of status.
- Participate in Finance planning meetings and briefings.
- Participate in development of Finance's portion of Incident Action Plan (IAP).
- Conduct investigations per Incident Commander's (IC) request.
- Provide skilled negotiators.
- Communicate to all affected emergency response personnel if work product is declared "Attorney-Client Privilege."
- Participate in Post-Incident Review (**SECTION 8.3**).

SECTION 5 INCIDENT PLANNING

Last revised: July 2011

5.1 Documentation Procedures

5.2 Incident Action Plan Process and Meetings

Figure 5.2-1 - Operational Period Planning Cycle

5.2.1 Incident Occurs / Notifications

5.2.2 Initial Response and Assessment

5.2.3 Unified Command Objectives Meeting

5.2.4 Tactics Meeting

5.2.5 Planning Meeting

5.2.6 Incident Action Plan (IAP) Preparation and Approval

5.2.7 Operations Briefing

5.2.8 Assess Progress

5.2.9 Agency Representative Meeting

5.2.10 News Briefing

5.3 IMS Forms

5.3.1 Incident Briefing IMS 201-OS

5.3.2 Incident Action Plan (IAP) Cover Sheet

5.3.3 Incident Objectives IMS 202-OS

5.3.4 Organization Assignment List IMS 203-OS

5.3.5 Assignment List IMS 204-OS

5.3.6 Communications Plan IMS 205-OS

5.3.7 Medical Plan IMS 206-OS

SECTION 5
INCIDENT PLANNING, CONTINUED

Last revised: January 2005

5.3.8 Incident Status Summary IMS 209-OS

5.3.9 Unit Log IMS 214-OS

5.3.10 Individual Log IMS 214a-OS

5.3.11 Operational Planning Worksheet ICS 215-OS

5.4 Site Safety and Health Plan

5.5 Decontamination Plan (Developed on an as-needed basis)

5.6 Disposal Plan

5.7 Incident Security Plan (Developed on an as-needed basis)

5.8 Demobilization Plan (Developed on an as-needed basis)

5.1 DOCUMENTATION PROCEDURES

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

costs.

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

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

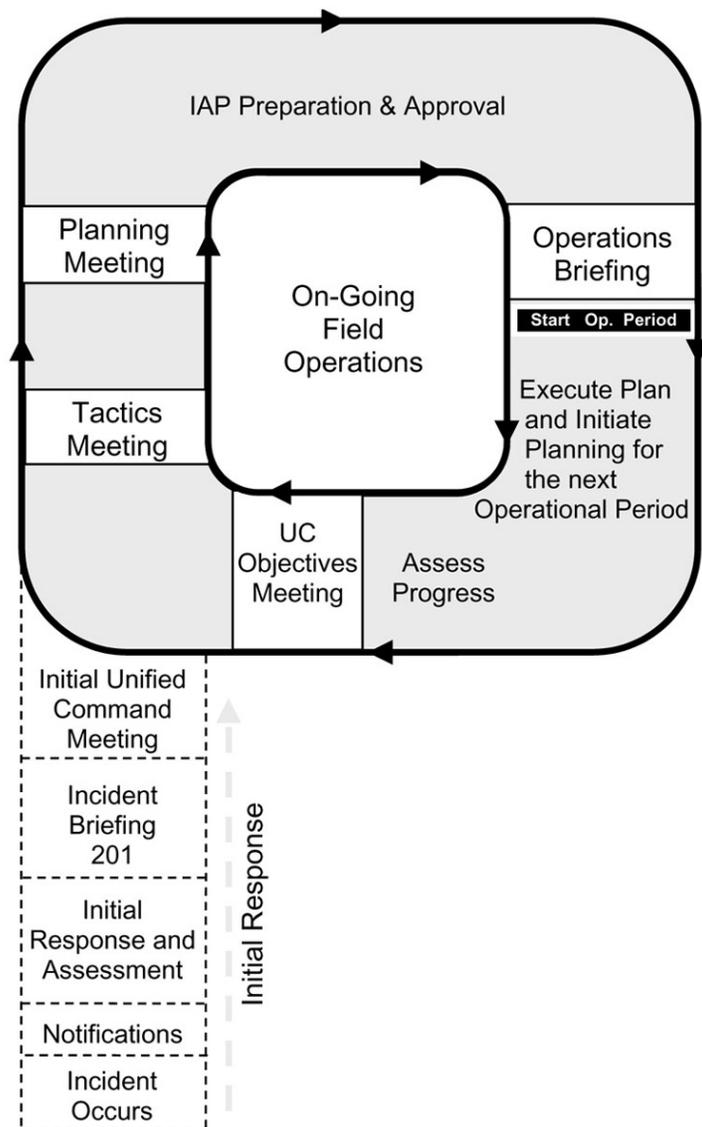
5.2 INCIDENT ACTION PLAN PROCESS AND MEETINGS

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

Longer-term, more complex responses, will likely require a dedicated Planning Section Chief (PSC) who must arrange for transition into the OPERATIONAL PERIOD PLANNING CYCLE. Certain meetings, briefings, and information-gathering during the Cycle lead to the Incident Action Plan (IAP) that guides operations of the next operational period. Only the meetings and events directly relevant to assembling the IAP are described.

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

FIGURE 5.2-1 - OPERATIONAL PERIOD PLANNING CYCLE



5.2.1 Incident Occurs / Notifications

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

5.2.2 Initial Response and Assessment

INCIDENT BRIEFING (IMS 201)

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

When: Immediately following initial response and assessment. Also conducted for change in IC/UC, response personnel, etc.

Briefer: Current IC/UC

Attendees: Prospective IC/UC; Command, and General Staff, as required

Agenda: Using IMS 201 as an outline, included:

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

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

5.2.3 Unified Command Objectives Meeting

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

When: Following Incident Briefing. Prior to Tactics Meeting.

Facilitator: UC Member

Attendees: UC Members; Command and General Staff, as appropriate

Agenda:

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

5.2.4 Tactics Meeting

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

When: Prior to Planning Meeting

Facilitator: Planning Section Chief

Attendees: Planning Section Chief, Operations Section Chief, Logistics Section Chief, Resources Unit Leader, Situation Unit Leader, and Environmental Unit Leader

Agenda:

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

5.2.5 Planning Meeting

This meeting defines incident objectives, strategies, and tactics and identifies resource needs for the next operational period. Depending on incident complexity, this meeting should last no longer than 45 minutes. This meeting fine-tunes objectives and priorities, identifies and solves problems, and defines work assignments and responsibilities on a completed IMS Form 215 (Operations Planning Worksheet). Meeting preparations include conducting a Tactics Meeting. Displays in the meeting room should include Objectives (IMS 202) for the next period, large sketch maps or charts clearly dated and timed, poster-size Operational Planning Worksheet (IMS 215), current resource inventory prepared by Resources Unit, and current situation status displays prepared by Situation Unit. After the meeting, the IMS 215 is used by the Logistics Section Chief to prepare the off-incident tactical and logistical resource orders, and used by Planning Section Chief to develop IAP assignment lists.

When: After the Tactics Meeting

Facilitator: Planning Section Chief

Attendees: Determined by IC/UC, generally IC/UC, Command Staff, General Staff, Air Operations Section Chief, Resources Unit Leader, Situation Unit Leader, Environmental Unit Leader, and Technical Specialists, as required

Agenda: Primary Responsibility

5.2.5 Planning Meeting, Continued

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

5.2.6 Incident Action Plan (IAP) Preparation and Approval

Immediately following the Planning Meeting, the attendees prepare their assignments

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

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

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

Optional Components (use as pertinent):

Optional Components (use as pertinent):		Responsible to Prepare
1.	Air Operations Summary (IMS 220)	Air Operations Branch Director
2.	Traffic Plan	Supply/Ground Support Group Leader
3.	Demobilization Plan	Demobilization Leader

5.2.7 Operations Briefing

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

When: About an hour prior to each shift

Facilitator: Planning Section Chief

Attendees: IC/UC, Command Staff, General Staff, Branch Directors, Division/Group Supervisors, Task Force/Strike Team Leaders (if possible), Unit Leaders, others as appropriate

Agenda:		Responsible to Present
1.	Review of IC/UC Objectives, changes to IAP.	Planning Section Chief
2.	Current response actions and last shift's accomplishments.	Operations Section Chief
3.	Weather and sea conditions forecast.	Situation Group Leader
	Division/Group and air operations	

4.	assignment.	Operations Section Chief
5.	Trajectory analysis.	Situation Group Leader
6.	Transport, communications, supply updates.	Logistics Section Chief
7.	Safety message.	Safety Officer
8.	Financial report.	Finance Section Chief
9.	News Media report.	Public Information Officer
10.	Assisting/cooperating organization/agency reports of concern.	Liaison Officer
11.	Incident Action Plan endorsement and motivational remarks.	IC/UC

5.2.8 Assess Progress

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

SPECIAL PURPOSE MEETINGS

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When: When UC is formed, prior to the first operational period Planning Meeting

Facilitator: UC member

Attendees: Only ICs who will comprise UC

5.2.9 Agency Representative Meeting

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

5.2.10 News Briefing

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

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5.3 IMS FORMS

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

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

For use by the Command Staff to gather information on the Incident Management Team's (IMT) efforts to implement applicable response plans. It is prepared by

the initial Incident Commander (IC) for providing documentation of the initial response.

- **INCIDENT ACTION PLAN**

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

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

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

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

- **INCIDENT OBJECTIVES - IMS 202**

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

- **ORGANIZATION ASSIGNMENT LIST - IMS 203**

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

- **ASSIGNMENT LIST - IMS 204**

Submits assignments at the level of Division and Groups.

- **COMMUNICATIONS PLAN - 205**

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

- **MEDICAL PLAN - IMS 206**

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

5.3 IMS FORMS, CONTINUED

All IMS Forms are available electronically via the Forms Navigator.

- **INCIDENT STATUS SUMMARY - IMS 209**

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

- **UNIT LOG - IMS 214**

Used to log activities for an entire unit.

- **INDIVIDUAL LOG - IMS 214a**

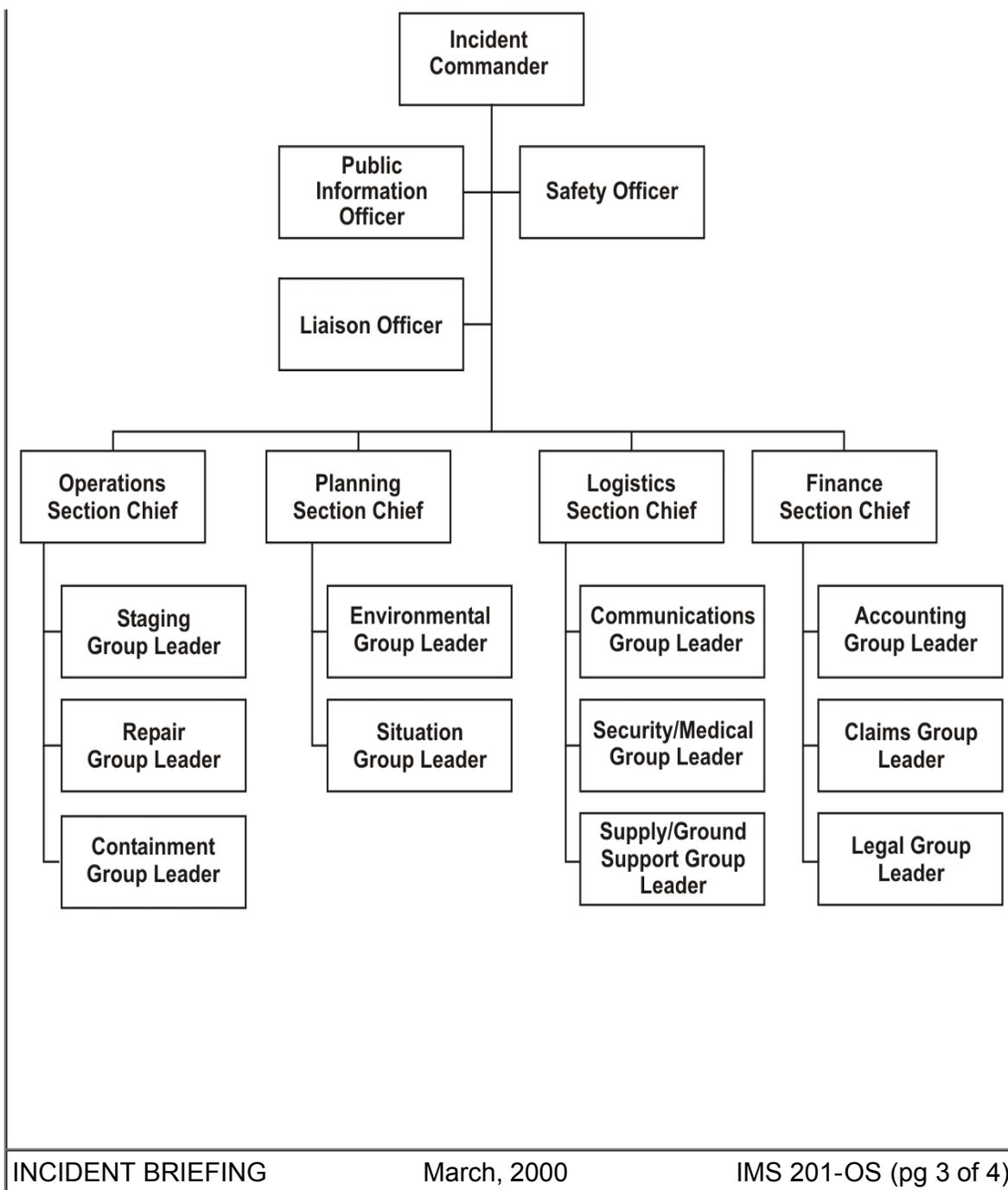
Used to log activities for an individual.

- **INDIVIDUAL LOG - IMS 215**

Used by the Logistics Section Chief to prepare the off-incident tactical and logistical resource orders, and used by Planning Section Chief to develop IAP assignment lists.

5.3.1 Incident Briefing IMS 201-OS

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING IMS 201-OS
3. Map/Sketch (Include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines or other graphics depicting situational and response status)		



5.3.1 Incident Briefing IMS 201-OS, Continued

1. Incident Name		2. Prepared By: (name)		INCIDENT BRIEFING IMS 201-OS	
		Date: Time:			
7. Resources Summary					
Resources Needed	Time Ordered	Resource Identifier	ETA	On Scene? (X)	Notes: (Location/Assignment/Status)

3. Approved by:

FOSC

SOSC

IC

INCIDENT ACTION PLAN

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

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

4. Prepared By: (Planning Section Chief)**Date/Time:**

IAP COVER SHEET

March, 2000

5.3.3 Incident Objectives IMS 202-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	INCIDENT OBJECTIVES IMS 202-OS
3. Overall Incident Objective(s)		

4. Objectives for Specified Operational Period

5. Safety Message for Specified Operational Period

Approved Site Safety Plan Located at:

6. Weather: See Attached Weather Sheet

7. Tides/Currents: See Attached Tide/Current Data

8. Time of Sunrise:

Time of Sunset:

9. Attachments (check if attached)

- Organization List (IMS 203-OS)
 Assignment List (IMS 204-OS)
 Communications Plan (IMS 205-OS)
- Medical Plan (IMS 206-OS)
 Weather

10. Prepared By: (Planning Section Chief) Date/Time:

INCIDENT OBJECTIVES

March, 2000

IMS 202-OS

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5.3.4 Organization Assignment List IMS 203-OS

1. Incident Name		2. Operational Period (Date/Time) From: To:		ORGANIZATION ASSIGNMENT LIST IMS 203-OS	
3. Incident Commander and Staff		7. Operations Section			
	Primary Deputy			Chief	<input type="text"/>
Federal:	<input type="text"/>	<input type="text"/>		Deputy	<input type="text"/>
State:	<input type="text"/>	<input type="text"/>		a. Branch I - Division/Groups	
IC:	<input type="text"/>	<input type="text"/>		Containment Group Leader Branch	<input type="text"/>
				Director	<input type="text"/>
Safety	<input type="text"/>			Recovery Group Leader Deputy	<input type="text"/>
					<input type="text"/>

Officer :

Information Officer:

Liaison Officer:

4. Agency Representatives

Agency	Name

5. Planning Section

Chief

Deputy

Resources Unit

Situation Unit

Environmental Unit

Documentation Unit

Demobilization Unit

Technical Specialists

6. Logistics Section

Chief

Deputy

Time Unit

Procurement Unit

Compensation Unit

Cost Unit

a. Support Branch

Director

Supply Unit

Facilities Unit

Transportation Unit

Vessel Support Unit

Ground Support Unit

b. Service Branch

Director

Communications Unit

Medical Unit

On-water Division / Group

Shoreside Division / Group

Decontamination Group Leader

Division / Repair Group Leader

Wildlife Branch Director Group

Division / Group

Division / Group

b. Branch II - Division/Groups

Branch Director

Deputy

Division / Group

c. Branch III - Division/Groups

Branch Director

Deputy

Division / Group

d. Air Operations Branch

Air Operations Br. Dir.

Air Tactical Supervisor

Air Support Supervisor

Helicopter Coordinator

Fixed-wing Coordinator

8. Finance Section

Chief

Deputy

Accounting Group Leader

Time Unit

Procurement Unit

Compensation/Claims Unit

Legal Group Leader Cost Unit

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

Texas Zone

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5.3.5 Assignment List IMS 204-OS

1. Incident Name	2. Operational Period (Date/Time)		ASSIGNMENT LIST IMS 204-OS	
	From:	To:		
3. Branch		4. Division/Group		
5. Operations Personnel	Name	Affiliation	Contact # (s)	
Operations Section Chief:				
Branch Director:				
Division/Croup Supervisor:				
6. Resources Assigned This Period	?X? indicates 204a attachment with special instructions			
Strike Team/Task Force/ Resource Identifier	Leader	Contact Info. #	# of Persons	Notes/Remarks
7. Assignments				
8. Special Instruction for Division/Group				
9. Communications (radio and/or phone contact numbers needed for this assignment)				
Name/Function	Radio: Freq./System/ Channel	Phone	Pager	

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

5.3.7 Medical Plan IMS 206-OS

1. Incident Name		2. Operational Period (Date/Time)		MEDICAL PLAN IMS 206-OS		
		From:	To:			
3. Medical Aid Stations						
Name	Location	Contact #	Paramedics On Site (Y/N)			
4. Transportation						
Ambulance Service	Address	Contact #	Paramedics On Board (Y/N)			
5. Hospitals						
Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		

6. Special Medical Emergency Procedures						
7. Prepared By (Medical Unit Leader)		Date/Time	8. Reviewed By (Safety Officer)		Date/Time	
MEDICAL PLAN		March, 2000			IMS 206-OS	

5.3.8 Incident Status Summary IMS 209-OS

1. Incident Name		2. Period Covered By Report From: To:		Time of Report	INCIDENT STATUS SUMMARY IMS 209-OS			
3. Spill Status (Estimated, in Barrels)			[OPS/EUL/SSC]		7. Safety Status [Safety Officer]			
Source Status:	Remaining Potential (bbl):				Since Last Report Total			
	Rate of Spillage (bbl/hr):				Responder Injury			
Secured	<input type="checkbox"/>	Unsecured	<input type="checkbox"/>			Public Injury		
		Since Last Report	Total					
Volume Spilled				8. Equipment Resources [RUL]				
Mass Balance/Oil Budget				Description	Ordered	Available / Staged	Assigned	Out of Service
Recovered Oil				Spill Resp. Vsls				
Evaporation				Fishing Vessels				
Natural Dispersion				Tugs				
Chemical Dispersion				Barges				
Burned				Other Vessels				
Floating, Contained								
Floating, Uncontained				Skimmers				
Onshore								
Total Spilled Oil Accounted For:				Boom (ft.)				
4. Waste Management (Estimated)			[OPS/Disposal]		Sbnt/Snr			
	Recovered	Stored	Disposed					
Oil (bbl)								

Oily Liquids (bbl)										Bm. (ft.)				
Liquids (bbl)														
Oily Solids (tons)										Vacuum Trucks				
Solids (tons)														
5. Shoreline Impacts (Estimated, in miles)				[PSC/EUL/SSC]										
Degree of Oiling	Affected	Cleaned	To Be Cleaned											
Light					Helicopters									
Medium					Fixed Wing									
Heavy					9. Personnel Resources [RUL]									
Total					Description	People in Cmd. Post	People in the Field	Total People On Scene						
6. Wildlife Impacts				[OPS/Wildlife Br.]										
Numbers in () indicate subtotal that are threatened / endangered species.				Died in Facility										
	Captured	Cleaned	Released	DOA	Euth.	Other								
Birds							Federal							
Mammals							State							
Reptiles							Local							
Fish							RP							
Total							Contract Personnel							
								Volunteers						
								Total Response Personnel From All Organizations:						
								10. Special Notes						
11. Prepared By (Situation Unit Leader)						Date/Time								
INCIDENT STATUS SUMMARY						March, 2000								
						IMS 209-OS								

5.3.9 Unit Log IMS 214-OS

1. Incident Name	2. Operational Period (Date / Time)	UNIT LOG IMS 214-OS	
	From: To:		
3. Unit Name	4. Unit Leader (Name and IMS Position)		
5. Personnel Assigned			
Name	IMS Position	Home Base	

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5.4 SITE SAFETY AND HEALTH PLAN

GENERAL SAFETY RULES AND EQUIPMENT:

1. There will be no eating, drinking, or smoking in the exclusion zone or the contamination reduction zone.
2. All personnel must pass through the contamination reduction zone to enter or exit the exclusion zone (hot zone).
3. As a minimum, Decontamination Team members must be in one (1) level of protection lower than that of the entry teams.
4. All decontamination equipment and systems must be in place before an entry can be made.
5. Entry team will consist of a minimum of two members with the same number of personnel assigned to a backup team. All entry personnel will adhere to the buddy system.
6. At the end of the incident, or directly after a possible exposure, each entry team member will take a full body shower and launder any personal clothing used at the scene.
7. All breathing air shall be certified as Grade D or better.
8. Where practical, all tools shall be of the nonsparking type.
9. Fire equipment shall be on hand when the situation warrants such support. At a minimum, fire extinguishers shall be available on scene.
10. Since incident evacuation may be necessary if an explosion, fire, or other event occurs; an individual shall be assigned to sound, alert, and notify the responsible command personnel and public officials (if required). The evacuation signal shall be four short blasts on an air horn every 30 seconds until all personnel are known to be evacuated.
11. An adequately stocked Emergency Medical Services (EMS) Unit shall be on site at all times.
12. The location and telephone number of the nearest medical facility shall be posted and known to all personnel.

GENERAL SAFETY BRIEFING:

Before any incident actions are taken, a briefing from the Command Staff will be accomplished with all personnel present. Personnel will sign a log sheet, attesting to being present at the briefing. Topics discussed should include known and suspected hazards along with the operation's goals and objectives.

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

EMERGENCY ACTION CONDITIONS:

Code Green All conditions are normal and incident work may continue.

Code Red All or specific work activities must cease at once due to one of the following:

- Indications of emissions from the incident such as CGI readings of 25% or greater, less than 19.5% oxygen, or one Mr/Hr of ionizing radiation are present
- Current or projected meteorological data indicates that a probable impact on working conditions could occur
- If background readings obtained during cessation of activities worsen, reassessment of the findings should be confirmed; actions to lower levels of contaminant or contingencies for further incident monitoring must take place

If this any of these conditions exists, incident personnel will immediately notify command staff.

Officials making evacuation/public health decisions will address the need for a public health advisory to potentially affected areas. This is because incident control methods may or may not reduce the source of contamination or threat to the general public.

If needed, a temporary sheltering or evacuation plan should be considered until levels of contamination are reduced or contained to levels deemed safe by all responsible authorities. Confirmation of these levels will be done by generally approved monitoring methods agreed to by the authorities in charge.

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

Sheltering/Evacuation Plan:
Ordered By:

PLAN REVIEW:

Incident Safety Officer:		
APPROVALS:		
Incident Commander:		
Operations Officer:		
Haz Mat Division Officer:		
PLAN PREPARED:	DATE:	TIME:
Incident Location:		
Incident Number:		
HAZARDOUS SITUATION:	(Known or suspected, contaminated media, type storage container, type occupancy, obvious leaks, spills or breaches, physical damage)	
RESPONDING AGENCIES:		
Agency:	Name:	
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

All government and contractor personnel who enter the exclusion zones or use air purifying respirators must be enrolled in a medical monitoring program.

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

EMERGENCY SERVICES:

Emergency medical facility:
Ambulance service:
Poison Control Center:
Chemical manufacturer's representative:
EMERGENCY PROCEDURES (in the event of personnel exposure):
EMERGENCY PROCEDURES (in the event of personnel injury):
HAZARD ASSESSMENT:
Attach Hazardous Materials Safety Data Sheets (MSDS), or other reference materials, for chemicals involved to this document.
MONITORING PROCEDURES:
Monitoring the incident to identify concentration of contaminants in all media. List the instruments to be used and what areas to be monitored.
Hot Zone (Exclusion Zone)
Warm Zone (Contamination Reduction Zone)
Cold Zone (Support Zone)

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

HEALTH AND SAFETY / RESPONSE PLAN

APPLIES TO SITE:
DATE:
PRODUCTS: (ATTACH MSDS)
SITE <input type="checkbox"/> Marine <input type="checkbox"/> Pipeline <input type="checkbox"/> Storage facility

CHARACTERIZATION		vessel			
		<input type="checkbox"/> Truck/Rail car	<input type="checkbox"/> Other		
Water	<input type="checkbox"/> Shoreline	<input type="checkbox"/> Wetlands	<input type="checkbox"/> Other		
	<input type="checkbox"/> Rocky	<input type="checkbox"/> Sandy	<input type="checkbox"/> Muddy	<input type="checkbox"/> Other	
	<input type="checkbox"/> River	<input type="checkbox"/> Creek	<input type="checkbox"/> Canal	<input type="checkbox"/> Bay	<input type="checkbox"/> Ocean
Land	<input type="checkbox"/> Mountains	<input type="checkbox"/> Hills	<input type="checkbox"/> Brushland	<input type="checkbox"/> Forest	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Other				
Use	<input type="checkbox"/> Public	<input type="checkbox"/> Government	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	
	<input type="checkbox"/> Recreational	<input type="checkbox"/> Industrial	<input type="checkbox"/> Farmland	<input type="checkbox"/> Other	
Weather	<input type="checkbox"/> Temp _____?F	<input type="checkbox"/> Wind/Dir. _____ mph	<input type="checkbox"/> Rain		
	<input type="checkbox"/> Snow	<input type="checkbox"/> Ice	<input type="checkbox"/> Other		
Pathways for Dispersion		<input type="checkbox"/> Air	<input type="checkbox"/> Water	<input type="checkbox"/> Land	<input type="checkbox"/> Other
Site Hazards					
<input type="checkbox"/> Chemical Hazards	<input type="checkbox"/> Boats				
<input type="checkbox"/> Slips, trips, falls	<input type="checkbox"/> Helicopters				
<input type="checkbox"/> Heat stress	<input type="checkbox"/> Noise				
<input type="checkbox"/> Cold stress	<input type="checkbox"/> Pumps, hoses				
<input type="checkbox"/> Weather	<input type="checkbox"/> Steam, hot water				
<input type="checkbox"/> Drowning	<input type="checkbox"/> Fire/Explosion				
<input type="checkbox"/> Heavy equipment	<input type="checkbox"/> Poor visibility				
<input type="checkbox"/> Drum handling	<input type="checkbox"/> Motor vehicles				
<input type="checkbox"/> Wildlife/plants	<input type="checkbox"/> Confined spaces (see attachment/appendix)				
<input type="checkbox"/> Hand/power tools	<input type="checkbox"/> Ionizing radiation				
<input type="checkbox"/> Lifting	<input type="checkbox"/> Other				

Air Monitoring			
----------------	--	--	--

% LEL	% O ₂	PPM Benzene	PPM H ₂ S
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<input type="checkbox"/> Other (specify)
--

<input type="checkbox"/> See attachment - Monitoring Results/Methods
--

CONTROL MEASURES:

Engineering Controls

- Source of release secured Valve(s) closed Facility shut down
 Site secured
 Other

Personal Protective Equipment (PPE) HAZWOPER Coordination with OSRO

- PVC suits PE/TYVEK suits Respirator
 SCBA PVC gloves Other
 Personal H₂S Monitor Hard hats Eye protection

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

HEALTH AND SAFETY / RESPONSE PLAN

CONTROL MEASURES (cont'd):

Decontamination

Stations established (see site map)

Sanitation

Facilities provided per OSHA 1910.120(n)

Illumination

Facilities provided per OSHA 1910.120(m)

Medical Surveillance

Facilities provided per OSHA 1910.120(f)

WORK PLAN: (buddy system must be used.)

Booming Skimmers Vac. trucks Pumping Excavation

Heavy equipment Sorbent pads Patching Hot work Shoring

Appropriate permits issued

Other (describe):

TRAINING(HAZWOPER training program):

Verified site workers trained per OSHA 1910.120

ORGANIZATION (See Incident Management System chart.):

EMERGENCY PLAN (See site map and Daily Medical Plan - IMS 206.):

SITE SECURITY:

Pre-entry briefing

Security level Low Medium High

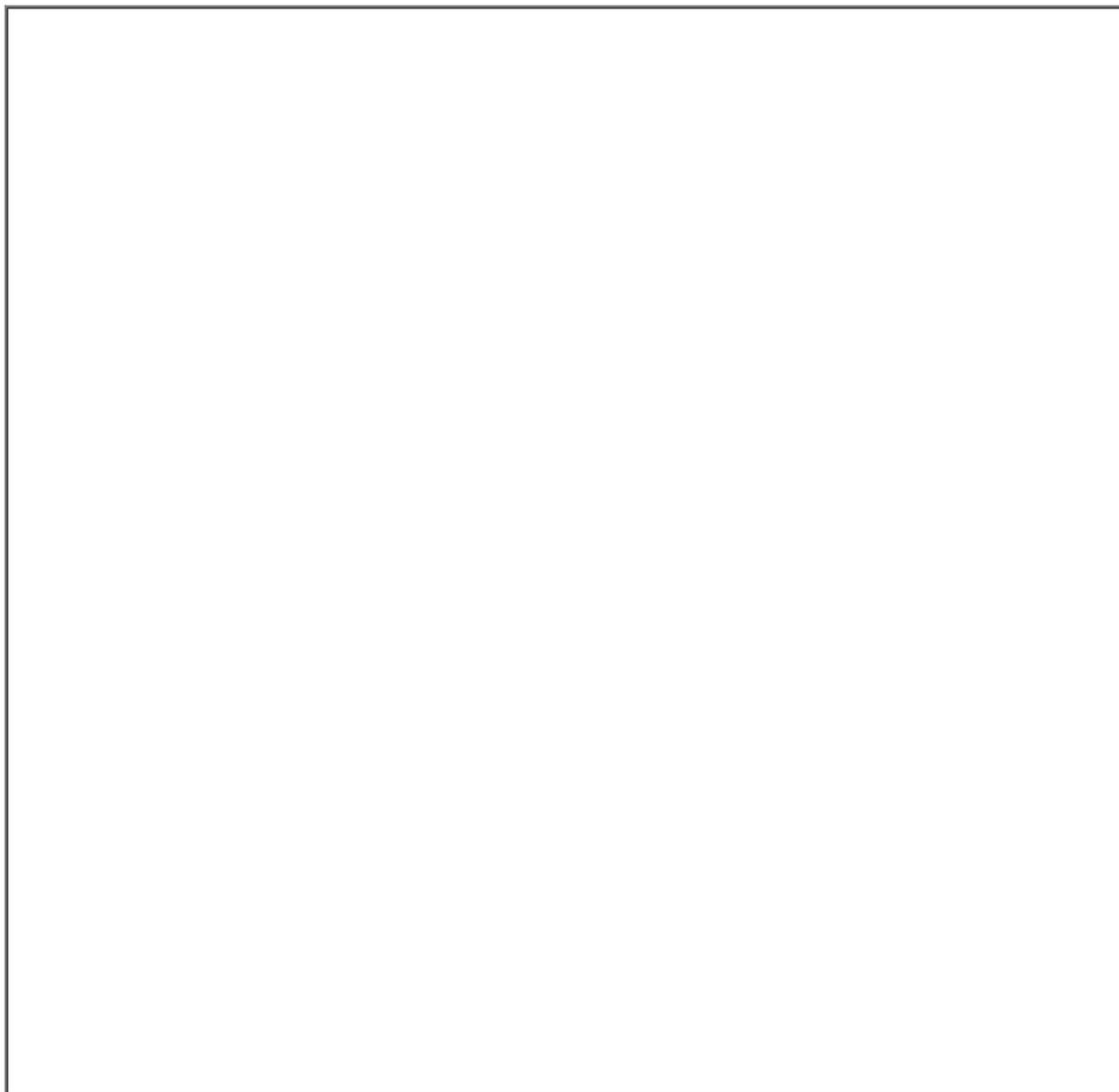
Other topics

DATE/TIME/PLAN COMPLETED:

By:

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SITE DIAGRAM



GENERAL DIAGRAM INSTRUCTIONS

1. Site Diagram should include the following (label the items drawn with corresponding letter):

- | | |
|---|--------------------------------|
| A. Sketch with major feature locations (buildings, drainage paths, roads, etc.) | F. Routes of entry |
| B. Hazardous substance location | G. Wind direction |
| C. Work zones (exclusion, contamination reduction, support) | H. Emergency evacuation routes |
| D. Command center and decontamination area | I. Assembly points |
| E. Access and access restrictions | J. First aid locations |
| | K. Communication system |

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

MEDICAL MONITORING: (What procedures to be used to monitor personnel for evidence of personal exposure.)

PERSONNEL POTENTIALLY EXPOSED TO HAZARDOUS MATERIALS:

NAME	POSITION	DATE/TIME

DECONTAMINATION PROCEDURES:
(Contaminated personnel, surfaces, materials, instruments, other equipment.)

DECONTAMINATION SOLUTIONS USED:

DISPOSAL PROCEDURES:

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

EQUIPMENT DECONTAMINATION:

	Clothing	SCBA/Resp.	Monitoring
Disposed:			
Cleaned:			
No Action:			

Specify:

DATE PREPARED:

PREPARED BY:

Authorized By:

Assistance in preparing this safety plan can be obtained from Haz Mat personnel.

5.5 DECONTAMINATION PLAN

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

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

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

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

- Decontamination Stations:

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

5.5 DECONTAMINATION PLAN, CONTINUED

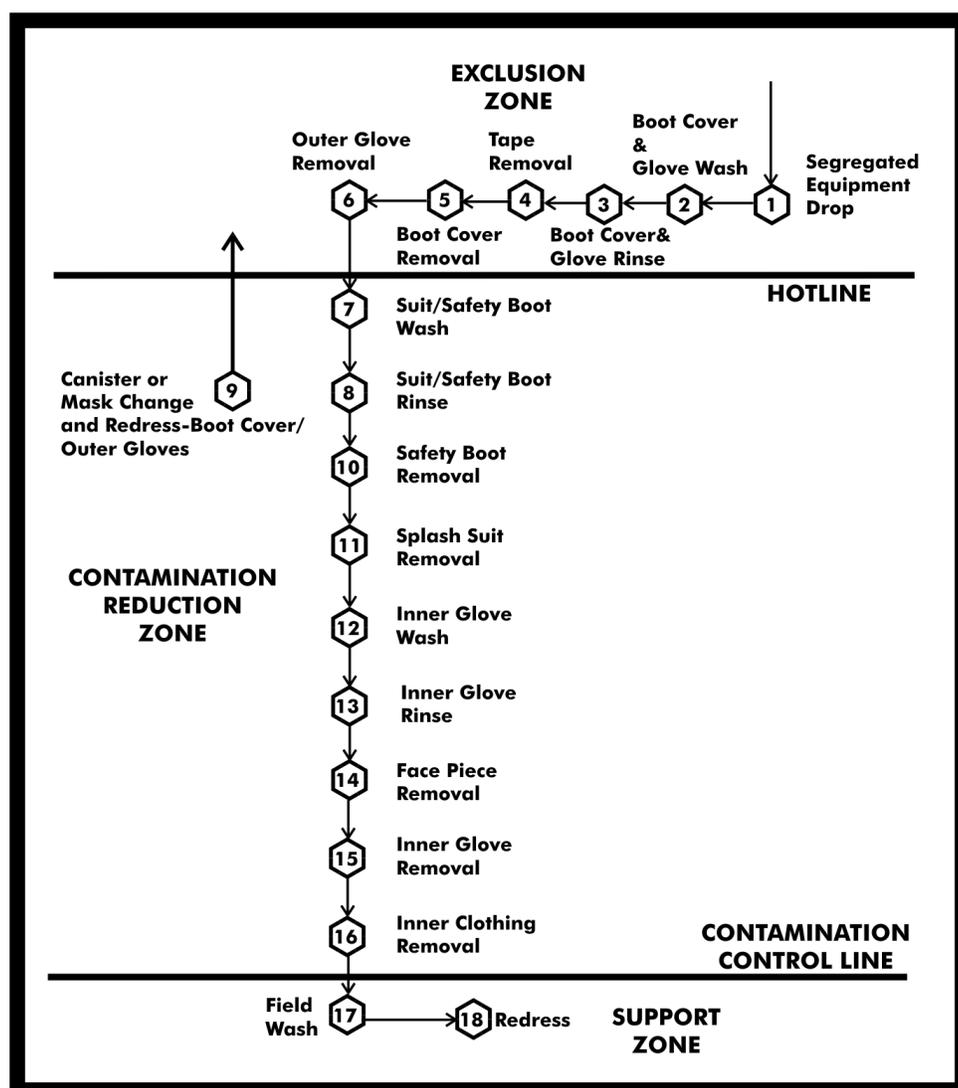
Procedures for these stations are as follows:

MAXIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Segregated equipment drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Boot cover and glove wash	Scrub outer boot cover and gloves with decontamination solution or detergent and water.
STATION 3	Boot cover and glove rinse	Rinse off decontamination solution from Station 2 using copious amounts of water.
STATION 4	Tape removal	Remove tape around boots and gloves and deposit in container with plastic liner.
STATION 5	Boot cover removal	Remove boot covers and deposit in containers with plastic liner.
STATION 6	Outer glove removal	Remove outer gloves and deposit in container with plastic liner.
STATION 7	Suit and boot wash	Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decontamination solution.
STATION 8	Suit, boot and glove rinse	Rinse off decontamination solution using water. Repeat as many times as necessary.
STATION 9	Canister or mask change	If worker leaves exclusion zone to change canister or this is the last step in the decontamination procedure; worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, and the worker returns to duty.
STATION 10	Safety boot removal	Remove safety boots and deposit in container with plastic liner.
STATION 11	Splash suit removal	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
STATION 12	Inner glove wash	Wash inner gloves with decontamination solution.
STATION 13	Inner glove rinse	Rinse inner gloves with water.
STATION 14	Face piece removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
STATION 15	Inner glove removal	Remove inner gloves and deposit in lined container.
STATION 16	Inner clothing removal	Remove clothing soaked with perspiration and place in lined container. Do not wear inner clothing off-site since there is a possibility that

		small amounts of contamination might have been transferred in removing the protective suit.
STATION 17	Field wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
STATION 18	Re-dress	Put on clean clothes.

5.5 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MAXIMUM DECONTAMINATION LAYOUT



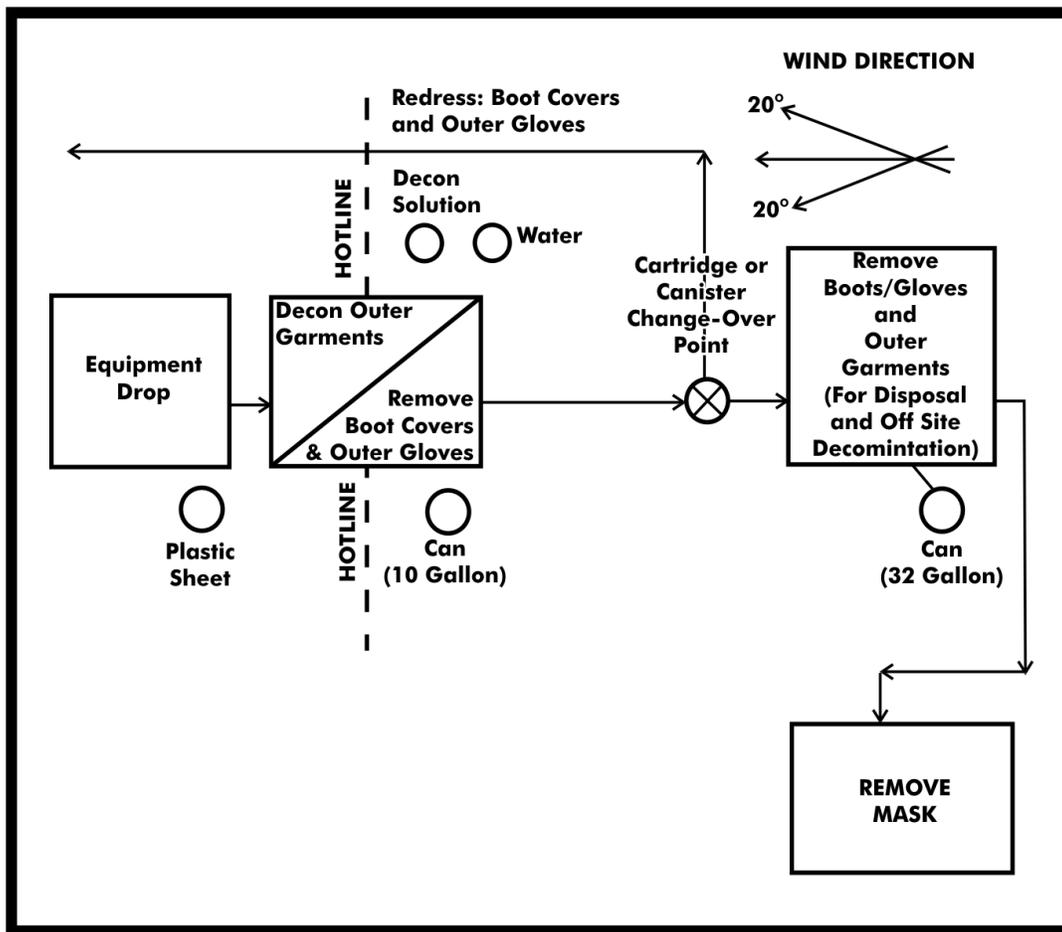
5.5 DECONTAMINATION PLAN, CONTINUED

MINIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Equipment drop	Deposit equipment used on site (tools,

		sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Outer garment, boots and gloves wash and rinse	Scrub outer boots, outer gloves, and splash suit with decontamination solution or detergent and water. Rinse off using copious amounts of water.
STATION 3	Outer boot and glove removal	Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4	Canister or mask change	If worker leaves exclusion zone to change canister (or mask) or this is the last step in the decontamination procedures; worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, the worker returns to duty.
STATION 5	Boot, gloves, and outer garment removal	Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
STATION 6	Face piece removal	Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7	Field wash	Hands and face are thoroughly washed. Shower as soon as possible.

5.5 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MINIMUM DECONTAMINATION LAYOUT



5.6 DISPOSAL PLAN

Attempts will be made to recover as much free product/liquids as possible. Recovered product will be reclaimed as a viable commercial chemical. Oily wastewater mixtures will be temporarily stored in empty ASTs, frac tanks, tanker trucks, etc until testing/profile is complete. Recovered liquids may be transferred to another Company facility for temporary storage if there is a lack of storage at the facility at which the incident occurred. All waste liquids will be treated and/or disposed of in accordance with local, state, and federal regulations.

Contaminated soils may be temporarily stored on the grounds at the facility or another Company facility nearby. This will be accomplished by secure diking around the contaminated soils to prevent stormwater runoff. The use of preexisting containment areas may be used for the temporary storage of contaminated soils. Contaminated soils to be land farmed onsite will be managed in accordance with industry standard practices and State requirements. Contaminated soils to be landfilled will be tested/profiled and disposed of in accordance with federal, state and local laws and regulations.

Spent Materials

The following materials, when mixed with oil may be considered hazardous waste:

- Contaminated equipment, including drums, tank parts, valves, and shovels

Contaminated Soil

- Contaminated Personal Protective Equipment (PPE)
- Contaminated absorbents (i.e. pads, sock boom, oil dry, etc)

(This facility generally would not use chemicals or decontaminating solutions)

All spent materials will be properly managed and disposed of in accordance with local, state, and federal regulations.

(b) (7)(F)



5.8 DEMOBILIZATION PLAN

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

Demobilization procedures:

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

SECTION 6 SENSITIVE AREAS / RESPONSE TACTICS

Last revised: July 2011

6.1 Area Description

6.2 Spill Containment / Recovery

Figure 6.2-1 - Response Tactics for Various Shorelines

6.3 Sensitive Area Protection

Figure 6.3-1 - Sensitive Area Protection Implement Sequence

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

6.4 Alternative Response Strategies

6.4.1 Dispersants

6.4.2 Bioremediation

6.4.3 In-Situ Burn

Figure 6.4-1 - Alternate Strategies Checklist

Figure 6.4-2 - Decision Guide for the Federal Bioremediation Approval Process

6.5 Wildlife Protection and Rehabilitation

6.6 Endangered and Threatened Species By State

6.7 Pipeline Sensitivity Maps

6.8 Tactical Plan Index

6.9 Tactical Plans

6.1 AREA DESCRIPTION

Description of shoreline types and specific shoreline protection and clean-up techniques are presented in **FIGURE 6.2-1** and **FIGURE 6.3-2**. The strategies and response examples are guidelines and must be evaluated during the response to ensure that the selected response methods are appropriate for the situation.

Sensitivity maps are provided in **SECTION 6.7**.

6.2 SPILL CONTAINMENT / RECOVERY

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

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

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

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

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

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

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

Containment/Diversion • Berms are constructed ahead of advancing surface spills

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

the boom

- Anchor points may cause minor disturbance to the environment

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

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

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

FIGURE 6.2-1 - RESPONSE TACTICS FOR VARIOUS SHORELINES

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Developed/ Unforested areas	<ul style="list-style-type: none"> • This class includes towns, cities, farms, pastures, fields, reclaimed wetlands, and other altered areas • Organisms and algae may be common in riprap structures and on pilings 	<ul style="list-style-type: none"> • Oil would percolate easily between the gravel and boulders of riprap structures • Oil would coat the intertidal areas of solid structures • Biota would be damaged or killed under heavy accumulations 	<ul style="list-style-type: none"> • May require high pressure spraying: <ul style="list-style-type: none"> • To remove oil • To prepare substrate for recolonization of barnacle and oyster communities • For aesthetic reasons

Freshwater Flat	<ul style="list-style-type: none"> • Mud or organic deposits located along the shore or in shallow portions of nontidal freshwater lakes and ponds • They are exposed to low wave and current energy • They are often areas of heavy bird use 	<ul style="list-style-type: none"> • Oil is expected to be deposited along the shoreline • Penetration of spilled oil into the water-saturated sediments of the flat will not occur • When sediments are contaminated, oil may persist for years 	<ul style="list-style-type: none"> • These areas require high priority for protection against oil contamination • Cleanup of freshwater flats is nearly impossible because of soft substrate • Cleanup is usually not even considered because of the likelihood of mixing oil deeper into the sediments during the cleanup effort • Passive efforts, such as sorbent boom can be used to retain oil as it is naturally removed
Fresh Marsh	<ul style="list-style-type: none"> • Found along freshwater ponds and lakes • These marshes have various types of vegetative cover, including floating aquatic mats, vascular submerged vegetation, needle and broad-leaved deciduous scrubs and shrubs, and broad-leaved evergreen scrubs and shrubs • Birds and mammals extensively use fresh marshes for feeding and 	<ul style="list-style-type: none"> • Small amounts of oil will contaminate the outer marsh fringe only; natural removal by wave action can occur within months • Large spills will cover more area and may persist for decades • Oil, particularly the heavy fuel oils, tends to adhere readily to marsh grasses 	<ul style="list-style-type: none"> • Marshes require the highest priority for shoreline protection • Natural recovery is recommended when: <ul style="list-style-type: none"> • A small extent of marsh is affected • A small amount of oil impacts the marsh fringe • The preferred cleanup method is a combination of low-pressure flushing, sorption, and vacuum pumping performed from boats • Any cleanup activities should be supervised closely to avoid excessive disturbances of the marsh surface or

	breeding purposes		roots <ul style="list-style-type: none"> Oil wrack and other debris may be removed by hand
Swamp	<ul style="list-style-type: none"> Swamps are freshwater wetlands having varying water depths with vegetation types ranging from shrubs and scrubs to poorly drained forested wetlands. Major vegetative types include: scrubs, shrubs, evergreen trees, and hardwood forested woodlands Birds and mammals use swamps during feeding and breeding activities 	<ul style="list-style-type: none"> Even small amounts of spilled oil can spread through the swamp Large spills will cover more area and may persist for decades since water-flushing rates are low Oil, particularly the heavy fuel oils, will adhere to swamp vegetation Unlike mangroves, the roots of swamp forest trees are not exposed; thus, little damage to trees is expected. Any underbrush vegetation, however, would be severely impacted 	<ul style="list-style-type: none"> No cleanup recommended under light conditions Under moderate to heavy accumulations, to prevent chronic oil pollution of surrounding areas placement of sorbent along fringe swamp forest (to absorb oil as it is slowly released) may be effective under close scientific supervision Proper strategic boom placement may be highly effective in trapping large quantities of oil, thus reducing oil impact to interior swamp forests Oil trapped by boom can be reclaimed through the use of skimmers and vacuums

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Open water	<ul style="list-style-type: none"> Have ocean like waves and currents Weather 	<ul style="list-style-type: none"> Most organisms are mobile enough to move out of the spill 	<ul style="list-style-type: none"> Booming, skimming, vacuuming, and natural recovery are

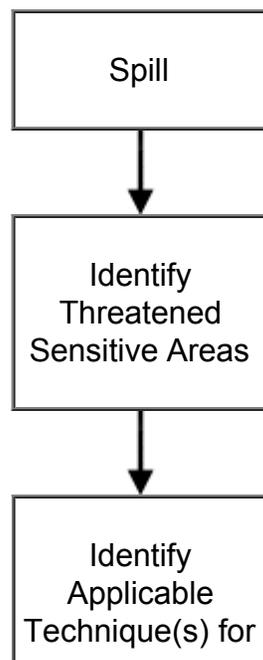
	<p>changes effect on-water conditions</p> <ul style="list-style-type: none"> • River mouths present problems • Thermal stratification occurs 	<p>area</p> <ul style="list-style-type: none"> • Aquatic birds are vulnerable to oiling • Human usage (such as transportation, water intakes, and recreational activities) may be restricted 	<p>the preferred cleanup methods</p> <ul style="list-style-type: none"> • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Large rivers	<ul style="list-style-type: none"> • May have varying salinities, meandering channels, and high flow rates • May include manmade structures (such as dams and locks) • Water levels vary seasonally • Floods generate high suspended sediment and debris loads 	<ul style="list-style-type: none"> • Fish and migratory birds are of great concern • Under flood conditions, may impact highly sensitive areas in floodplains • Human usage may be high • When sediments are contaminated, oil may persist for years 	<ul style="list-style-type: none"> • Booming, skimming, and vacuuming are the preferred cleanup methods • Cleanup options include natural recovery, physical herding, sorbents, and debris/vegetation removal
Small lakes and ponds	<ul style="list-style-type: none"> • Water surface can be choppy • Water levels can fluctuate widely • May completely freeze in winter • Bottom sediments near the shore can be soft and muddy • Surrounding area may include wet meadows and marshes 	<ul style="list-style-type: none"> • Wildlife and socioeconomic areas likely to be impacted • Wind will control the oil's distribution 	<ul style="list-style-type: none"> • Booming, skimming, vacuuming, and sorbents are the preferred cleanup methods • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Small rivers and streams	<ul style="list-style-type: none"> • Wide range of water bodies - fast flowing streams to slow moving bayous with low muddy 	<ul style="list-style-type: none"> • Usually contaminate both banks and the water column, exposing a large number of biota to 	<ul style="list-style-type: none"> • Booming, skimming, vacuuming, sorbents, barriers, and berms are the preferred cleanup

	banks and fringed with vegetation <ul style="list-style-type: none"> • May include waterfalls, rapids, log jams, mid-channel bars, and islands • Weathering rates may be slower because spreading and evaporation are restricted 	being oiled <ul style="list-style-type: none"> • Water intakes for drinking water, irrigation, and industrial use likely to be impacted 	methods <ul style="list-style-type: none"> • Cleanup options include physical herding, natural recovery, debris removal, vegetation removal, and in-situ burn
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6.3 SENSITIVE AREA PROTECTION

Protection refers to the implementation of techniques or methods to prevent oil from making contact with a shoreline or aquatic area that is determined to be sensitive for environmental, economic, cultural, or human use reasons. Implementation of sensitive area protection techniques must consider a number of factors such as sensitive features, priorities for areas to be protected, and potential degree of impact. In the event a product spill reaches a major area waterway, it may be necessary to protect downstream sensitive areas if it appears that local containment and recovery efforts will not be sufficient to control the entire spill. Major waterways and specific sensitive areas located downstream of the pipeline are provided in [SECTION 6.7](#).

FIGURE 6.3-1 - SENSITIVE AREA PROTECTION IMPLEMENT SEQUENCE



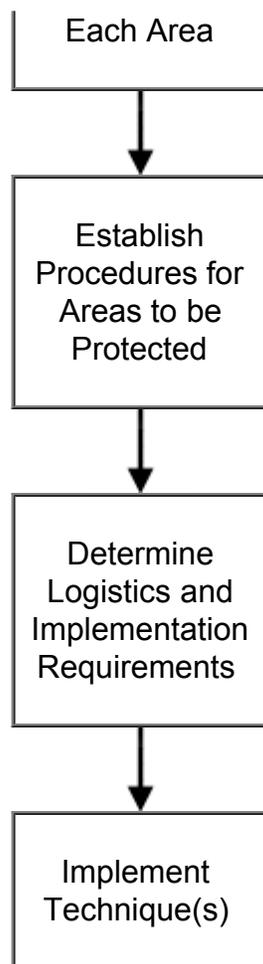


FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS
Removal				
1. Manual Removal	Hand tool (scrapers, wire brushes, shovels, cutting tools, wheel barrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions	<u>Equipment</u> misc. hand tools <u>Personnel</u> 10-20 workers	<ul style="list-style-type: none"> • Can be used on all habitat types • Light to moderate oiling conditions for stranded oil or heavy oils that have formed 	<ul style="list-style-type: none"> • Sediment disturbance and erosion potential

	are light or sporadic and/or access is limited.		semi-solid to solid masses <ul style="list-style-type: none"> • In areas where roosting or birthing animals cannot or should not be disturbed 	
2. Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.	<u>Equipment</u> motor grader, backhoe, dump truck elevating scrapers <u>Personnel</u> 2-4 workers plus equipment operators	<ul style="list-style-type: none"> • On land, wherever surface sediments are accessible to heavy equipment • Large amounts of oiled materials 	<ul style="list-style-type: none"> • Removes upper 2 to 12 inches of sediments
3. Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	<u>Equipment</u> misc. hand tools misc. sorbents <u>Personnel</u> 2-10 workers	<ul style="list-style-type: none"> • Can be used on all habitat types • Free-floating oil close to shore or stranded on shore, secondary treatment method after gross oil removal • Sensitive areas where access is restricted 	<ul style="list-style-type: none"> • Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments
4. Vacuum / Pumps / Skimmers	Pumps, vacuum trucks, skimmers are	<u>Equipment</u> 50- to 100-bbl vacuum trucks	<ul style="list-style-type: none"> • Can be used on all habitat 	<ul style="list-style-type: none"> • Typically does not remove all oil

	used to remove oil accumulations from land or relatively thick floating layers from the water.	w/hoses, nozzle screens or skimmer heads <u>Personnel</u> 2-6 workers plus truck operators per vacuum truck	types <ul style="list-style-type: none"> • Stranded oil on the substrate • Shoreline access points 	<ul style="list-style-type: none"> • Can remove some surface organisms, sediments, and vegetation
Washing				
5. Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered.? Frequently used with flushing.	<u>Equipment</u> 100- to 200-gpm pumping systems 100-ft perforated header hose per system 200-ft containment booms per system oil recovery device per system <u>Personnel</u> 6-8 workers per system	<ul style="list-style-type: none"> • All shoreline types except steep intertidal areas • Heavily oiled areas where the oil is still fluid and adheres loosely to the substrate • Where oil has penetrated into gravel sediments • Used with other washing techniques 	<ul style="list-style-type: none"> • Can impact clean downgradient areas • Can displace some surface organisms if present • Sediments transported into water can affect water quality

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

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS
Washing, Continued				
6. Flushing	Water streams at low to moderate	<u>Equipment</u> 50- to 100-gpm/ 100-psi pumping	<ul style="list-style-type: none"> • Substrates, riprap, and solid man- 	<ul style="list-style-type: none"> • Can impact clean downgradient

	pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments through agitation and direct contact.? Oil is flushed back into the water or a collection point for subsequent recovery.? May also be used to flush out oil trapped by shoreline or aquatic vegetation.	systems with manifold 100-ft hoses and nozzles per system 200-ft containment booms per system oil recovery device per system <u>Personnel</u> 8-10 workers per system	made structures <ul style="list-style-type: none"> • Oil stranded onshore • Floating oil on shallow intertidal areas 	areas <ul style="list-style-type: none"> • Will displace many surface organisms if present • Sediments transported into water can affect water quality • Hot water can be lethal to many organisms • Can increase oil penetration depth
7. Spot (High Pressure Washing)	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where flushing is ineffective.? Oil is directed back into water or collection point for subsequent recovery.	<u>Equipment</u> 1,200- to 4,000-psi units with hose and spray wand 100-ft containment booms per unit oil recovery device per unit <u>Personnel</u> 2-4 workers per unit	<ul style="list-style-type: none"> • Bedrock, man-made structures, and gravel substrates • When low-pressure flushing is not effective • Directed water jet can remove oil from hard to reach sites 	<ul style="list-style-type: none"> • Will remove most organisms if present • Can damage surface being cleaned • Can affect clean downgradient or nearby areas
In Situ				
8. Passive Collection	Sorbent/snare booms or other sorbent materials are anchored at the waterline adjacent to heavily oiled areas to	<u>Equipment</u> sorbent/snare boom stakes or anchor systems <u>Personnel</u> 4-10 workers	<ul style="list-style-type: none"> • All shoreline types • Calm wave action • Slow removal process 	<ul style="list-style-type: none"> • Significant amounts of oil can remain on the shoreline for extended periods of time

	contain and recover oil as it leaches from the sediments.			
9. Sediment Tilling	Mechanical equipment or hand tools are used to till lightly to moderately oiled surface sediments to maximize natural degradation processes.	<u>Equipment</u> tractor fitted with tines, dicer, ripper blades, etc. or rototillers or hand tools <u>Personnel</u> 2-10 workers	<ul style="list-style-type: none"> Any sedimentary substrate that can support heavy equipment Sand and gravel beaches with subsurface oil Where sediment is stained or lightly oiled Where oil is stranded above normal high waterline 	<ul style="list-style-type: none"> Significant amounts of oil can remain on the shoreline for extended periods of time Disturbs surface sediments and organisms

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

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS
In Situ, Continued				
10. In Situ Bioremediation	Fertilizer is applied to lightly to moderately oiled areas to enhance microbial growth and subsequent biodegradation of oil.	<u>Equipment</u> fertilizer applicators tilling device, if required <u>Personnel</u> 2-4 workers per applicator	<ul style="list-style-type: none"> Any shoreline habitat type where nutrients are deficient Moderate to heavily oiled substrates 	<ul style="list-style-type: none"> Significant amounts of oil can remain on the shoreline for extended periods of time Can disturb surface sediments

			After other techniques have been used to remove free product on lightly oiled shorelines Where other techniques are destructive or ineffective	and organisms
11. Log/Debris?? Burning	Oiled logs, driftwood, vegetation, and debris are burned to minimize material handling and disposal requirements.? Material should be stacked in tall piles and fans used to ensure a hot, clean burn.	<u>Equipment</u> set of fire control equipment fans combustion promoter <u>Personnel</u> 2-4 workers per set of fire control equipment	<ul style="list-style-type: none"> • On most habitats except dry muddy substrates where heat may impact the biological productivity of the habitat • Where heavily oiled items are difficult or impossible to move • Many potential applications on ice 	<ul style="list-style-type: none"> • Heat may impact local near-surface organisms • Substantial smoke may be generated • Heat may impact adjacent vegetation
12. Natural Recovery	No action is taken and oil is allowed to degrade naturally.	None required	<ul style="list-style-type: none"> • All habitat types • When natural removal rates are fast • Degree of oiling is 	<ul style="list-style-type: none"> • Oil may persist for significant periods of time • Remobilized oil or sheens may impact other areas

			<p>light</p> <ul style="list-style-type: none"> • Access is severely restricted or dangerous to cleanup crews • When cleanup actions will do more harm than natural removal 	Higher probability of impacting wildlife
13. Dispersants	Dispersants are used to reduce the oil/water interfacial tension thereby decreasing the energy needed for the slick to break into small particles and mix into the water column. ? Specially formulated products containing surface-active agents are sprayed from aircraft or boats onto the slick.	Dispersants Boat or aircraft	<ul style="list-style-type: none"> • Water bodies with sufficient depth and volume for mixing and dilution • When the impact of the floating oil has been determined to be greater than the impact of dispersed oil on the water-column community 	<ul style="list-style-type: none"> • Use in shallow water could affect benthic resources • May adversely impact organisms in the upper 30 feet of the water column • Some water-surface and shoreline impacts could occur

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

6.4 ALTERNATIVE RESPONSE STRATEGIES

Non-mechanical methods for cleanup operations could involve the use of chemical cleaning products or appropriate bioremediation products. A checklist for evaluating

different alternate strategies is present in **FIGURE 6.4-1**.

6.4.1 Dispersants

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

A dispersant is an agent (surfactant) which reduces the surface tension of the oil and water and allows them to mix more readily. In the presence of sufficient mixing energy supplied by waves, wind, or man-made turbulence, the oil can remain suspended in the water column resisting resurfacing and re-coalescing. Dispersants may be effective in area where environmental or logistical considerations do not allow the deployment of cleanup equipment and personnel, and may reduce the overall level of effort and manpower requirement and personnel necessary for responding to major spills.

If there is a potential threat to a USCG Pre-authorized zone USCG Classified OSRO equipment may need to be activated. The Company will not use dispersants without the concurrence of the FOSC. Dispersants will not be used without concurrence of the EPA and the state with jurisdiction over the affected waters. Refer to the NCP for dispersant use policies and procedures.

6.4.2 Bioremediation

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

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

There are, however, instances on open seas or shorelines where standard recovery or cleanup techniques are not practical or will result in significant environmental or physical impacts. In these cases, bioremediation may be a viable response option and should be considered for use. **FIGURE 6.4-2** provides a federal decision guide for bioremediation consideration.

6.4.3 In-Situ Burn

In-Situ burning has been successfully used as a viable technique for mitigating oil spills off shore and in a marsh type environment. This is especially true of areas that have mostly grassy vegetation with little or no woody vegetation. In a grassy marshland

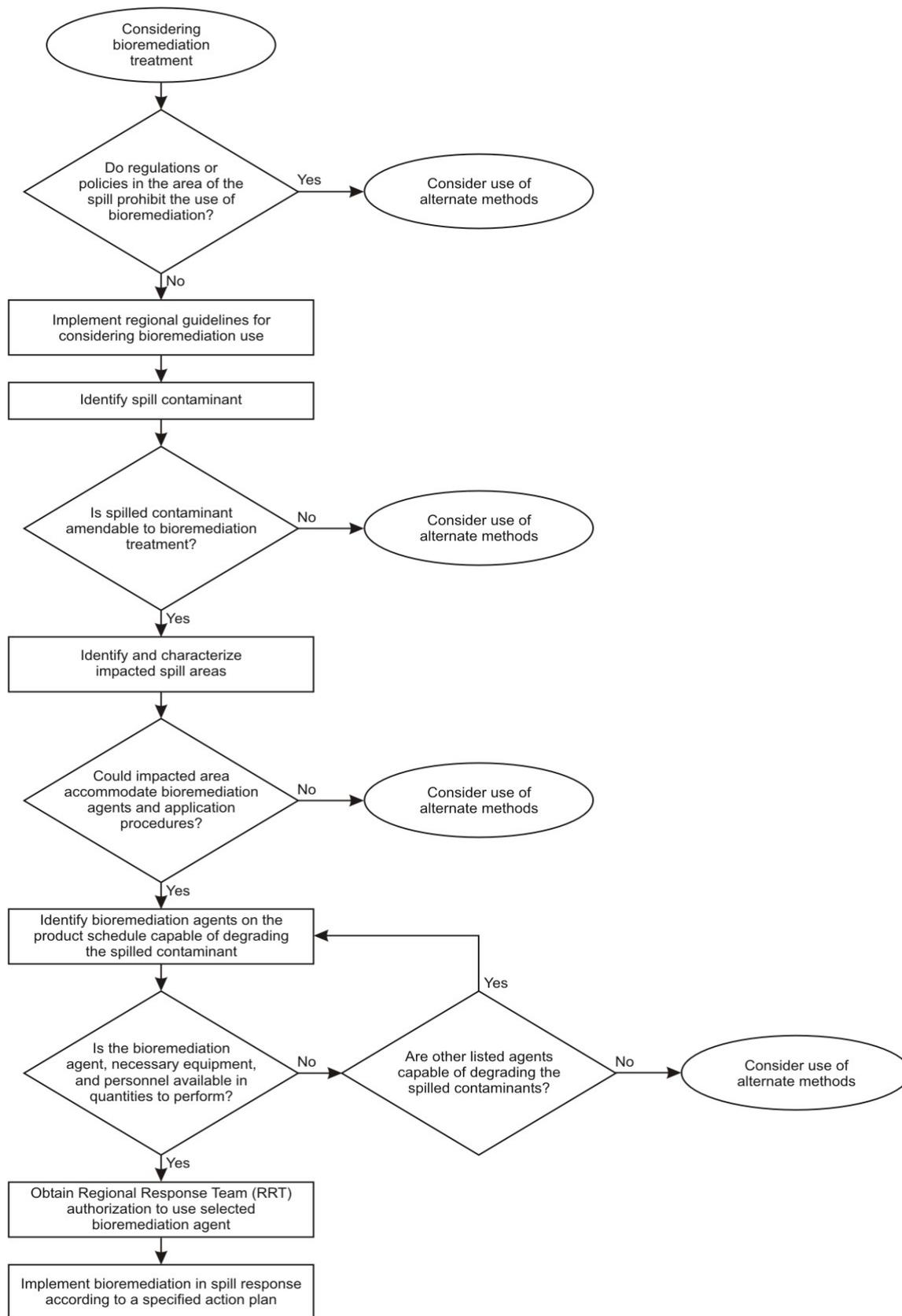
environment, an In-Situ burn may produce less long-term damage to the environment than traditional mechanical cleanup methods.

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

FIGURE 6.4-1 - ALTERNATE STRATEGIES CHECKLIST

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

FIGURE 6.4-2 - DECISION GUIDE FOR THE FEDERAL BIOREMEDIATION APPROVAL PROCESS



6.5 WILDLIFE PROTECTION AND REHABILITATION

- The Company will support wildlife protection and rehabilitation efforts during the response, but will not typically directly manage these efforts

- Company personnel will not attempt to rescue or clean affected wildlife, because such actions may cause harm to the individuals or may place the animals at further risk
- Federal and state agencies responsible for wildlife capture and rehabilitation will typically coordinate capturing and rehabilitating oiled wildlife; a list of these agencies are included in **FIGURE 3.1-3**
- Wildlife rehabilitation specialists may be utilized to assist in capturing and rehabilitating oiled animals as well as deterring unaffected animals away from the spill site.
- U.S Fish & Wildlife is to be notified and consulted in establishing incident-specific priorities for the protection of the resources provided.

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Ambrosia, south Texas	<i>Ambrosia cheiranthifolia</i>	Grasslands and various mesquite-dominated shrublands	E	Texas
Amphipod, Peck's cave	<i>Stygobromus (=Stygonectes) pecki</i>	Subterranean springs	E	Texas
Ayenia, Texas	<i>Ayenia limitaris</i>	Dense subtropical woodlands	E	Texas
Bat, Mexican long-nosed	<i>Leptonycteris nivalis</i>	Caves or similar mines and tunnels	E	Texas
Beetle, American burying	<i>Nicrophorus americanus</i>	Cropland/hedgerow	E	Texas
Beetle, Coffin Cave mold	<i>Batrisodes texanus</i>	Isolated caves within the Edwards Limestone Formation	E	Texas
Beetle, Comal Springs dryopid	<i>Stygoparnus comalensis</i>	Comal Springs	E	Texas
Beetle, Comal Springs riffle	<i>Heterelmis comalensis</i>	Gravel substrates and shallow riffles in spring runs	E	Texas
Beetle, Helotes mold	<i>Batrisodes venyivi</i>	Cavelike formations of Bexar	E	Texas

		County, Texas		
Beetle, Kretschmarr Cave mold	<i>Texamaurops reddelli</i>	Edward's Plateau caves	E	Texas
Beetle, Tooth Cave ground	<i>Rhadine persephone</i>	Karst caves within the Edwards Limestone Formation	E	Texas
Bladderpod, white	<i>Lesquerella pallida</i>	Exposed calcareous Weches Formation outcrops	E	Texas
Bladderpod, Zapata	<i>Lesquerella thamnophila</i>	Open, evergreen thorn shrublands on gravelly to sandy loams	E	Texas
Cactus, black lace	<i>Echinocereus reichenbachii</i> var. <i>albertii</i>	Grassy openings on south Texas rangeland	E	Texas
Cactus, Nellie cory	<i>Coryphantha minima</i>	Rock crevices on novaculite outcrops	E	Texas

T - Threatened

E - Endangered

Texas Zone

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Cactus, Sneed pincushion	<i>Coryphantha sneedii</i> var. <i>sneedii</i>	Grasslands or lechuguilla-sotol shrublands on limestone outcrops and rocky slopes	E	Texas
Cactus, star	<i>Astrophytum asterias</i>	Sparse, fairly open brushland	E	Texas
Cactus, Tobusch fishhook	<i>Ancistrocactus tobuschii</i>	Sparse, fairly open brushland	E	Texas
Cat's-eye, Terlingua Creek	<i>Cryptantha crassipes</i>	Low hills and gentle slopes composed of a platy, yellowish limestone	E	Texas
Crane, whooping except where EXPN	<i>Grus americana</i>	Cropland/hedgerow, grassland/herbaceous	E	Texas

Curlew, Eskimo	<i>Numenius borealis</i>	Cropland/hedgerow, grassland/herbaceous, tundra	E	Texas
Darter, fountain	<i>Etheostoma fonticola</i>	Springs and spring-fed streams in dense beds of aquatic plants	E	Texas
Dawn-flower, Texas prairie	<i>Hymenoxys texana</i>	Poorly drained, sparsely vegetated areas	E	Texas
Dogweed, ashy	<i>Thymophylla tephroleuca</i>	Fine sand or sandy-loam soils on level or rolling grasslands often shrub-invaded	E	Texas
Falcon, northern aplomado	<i>Falco femoralis septentrionalis</i>	Open grassland or savannah with scattered trees or shrubs	E	Texas
Flycatcher, southwestern willow	<i>Empidonax traillii extimus</i>	Streamside thickets, brushy fields, and willows	E	Texas
Frankenia, Johnston's	<i>Frankenia johnstonii</i>	Arid, gravelly, limestone-derived soils on gentle slopes	E	Texas
Gambusia, Big Bend	<i>Gambusia gaigei</i>	Herbaceous wetlands	E	Texas
Gambusia, Clear Creek	<i>Gambusia heterochir</i>	Springs and outflow streams	E	Texas
Gambusia, Pecos	<i>Gambusia nobilis</i>	Herbaceous wetlands	E	Texas

T - Threatened
E - Endangered

Texas Zone

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Gambusia, San Marcos	<i>Gambusia georgei</i>	Herbaceous wetlands	E	Texas
Ground beetle, [unnamed]	<i>Rhadine exilis</i>	Burrows, under stones and in damp soil	E	Texas
Ground beetle, [unnamed]	<i>Rhadine infernalis</i>	Burrows, under stones and in damp soil	E	Texas
		Karst caves		

Harvestman, Bee Creek Cave	<i>Texella reddelli</i>	within the Edwards Limestone Formation	E	Texas
Harvestman, Bone Cave	<i>Texella reyesi</i>	Karst caves within the Edwards Limestone Formation	E	Texas
Harvestman, Cokendolpher Cave	<i>Texella cokendolpheri</i>	Subterranean obligate	E	Texas
Jaguarundi, Gulf Coast	<i>Herpailurus (=Felis) yagouaroundi cacomitli</i>	Tropical and subtropical forests	E	Texas
Ladies' -tresses, Navasota	<i>Spiranthes parksii</i>	Narrow band of vegetation called the Post-Oak Savannah	E	Texas
Manatee, West Indian	<i>Trichechus manatus</i>	Shallow coastal waters, estuaries, bays, rivers, and lakes	E	Texas
Manioc, Walker's	<i>Manihot walkerae</i>	Tamaulipan grassland-thornscrub community	E	Texas
Meshweaver, Braken Bat Cave	<i>Cicurina venii</i>	Subterranean obligate	E	Texas
Meshweaver, Government Canyon Bat Cave	<i>Cicurina vespera</i>	Subterranean obligate	E	Texas
Meshweaver, Madla's Cave	<i>Cicurina madla</i>	Subterranean obligate	E	Texas
Meshweaver, Robber Baron Cave	<i>Cicurina baronia</i>	Subterranean obligate	E	Texas
Ocelot	<i>Leopardus (=Felis) pardalis</i>	Forest, wetlands	E	Texas

T - Threatened
E - Endangered

Texas Zone

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

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COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Phlox, Texas trailing	<i>Phlox nivalis ssp. texensis</i>	"In fire-maintained openings in upland longleaf pine savannas or	E	Texas
Pitaya, Davis' green	<i>Echinocereus viridiflorus var. davisii</i>	Flat hills on a specific substrate rich in quartz sand, in west Texas	E	Texas
Pondweed, Little Aguja (=Creek)	<i>Potamogeton clystocarpus</i>	Pools and flowing streams with igneous-derived alluvium.	E	Texas
Poppy-mallow, Texas	<i>Callirhoe scabriuscula</i>	Grasslands, shin oak shrublands, or open oak or mesquite woodlands	E	Texas
Prairie-chicken, Attwater's greater	<i>Tympanuchus cupido attwateri</i>	Forest	E	Texas
Pseudoscorpion, Tooth Cave	<i>Tartarocreagris texana</i>	Dry caves within the Edwards Limestone Formation	E	Texas
Pupfish, Comanche Springs	<i>Cyprinodon elegans</i>	Spring-marsh complex, irrigation canals	E	Texas
Pupfish, Leon Springs	<i>Cyprinodon bovinus</i>	Spring-marsh complex, irrigation canals	E	Texas
Rush-pea, slender	<i>Hoffmannseggia tenella</i>	Sparsely vegetated openings within bluestem-sacahuista grasslands	E	Texas
Salamander, Barton Springs	<i>Eurycea sosorum</i>	Aquatic, rubble in the spring outflow at Barton Springs	E	Texas

Salamander, Texas blind	<i>Typhlomolge rathbuni</i>	Subterranean streams of the Purgatory Creek system	E	Texas
Sand-verbena, large-fruited	<i>Abronia macrocarpa</i>	Deep, well-drained sands	E	Texas
Sawfish, smalltooth	<i>Pristis pectinata</i>	Shallow coastal waters of tropical seas and estuaries; sheltered bays, on shallow banks, and in estuaries or river mouths	E	Texas
Sea turtle, hawksbill	<i>Eretmochelys imbricata</i>	Clear offshore waters off the mainland and on island shelves	E	Texas
Sea turtle, Kemp's ridley	<i>Lepidochelys kempii</i>	Shallow areas with sandy and muddy bottoms	E	Texas

T - Threatened
E - Endangered

Texas Zone

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Sea turtle, leatherback	<i>Dermochelys coriacea</i>	Warm sands of tropical beaches	E	Texas
Snail, Pecos assiminea	<i>Assiminea pecos</i>	Permanent, flowing, unpolluted, fresh to moderately saline water; Moist or saturated soil at stream or spring run margins with native vegetation growing in or adapted to aquatic or very wet environment, such as salt grass or sedges; and Stable water levels with	E	Texas

		natural diurnal and seasonal variation		
Snowbells, Texas	<i>Styrax texanus</i>	Praries and pastures	E	Texas
Spider, Government Canyon Bat Cave	<i>Neoleptoneta microps</i>	Subterranean obligate	E	Texas
Spider, Tooth Cave	<i>Leptoneta myopica</i>	Subterranean obligate	E	Texas
Tern, least interior pop.	<i>Sterna antillarum</i>	Open sandy or gravelly beach, dredge spoil and other open shoreline areas	E	Texas
Toad, Houston	<i>Bufo houstonensis</i>	Soft sandy soils; pine forest, mixed deciduous forest	E	Texas
Vireo, black-capped	<i>Vireo atricapillus</i>	Shrubland/chaparral	E	Texas
Warbler (=wood), golden-cheeked	<i>Dendroica chrysoparia</i>	Woodlands with tall Ashe juniper, oaks, and other hardwood trees	E	Texas
Whale, finback	<i>Balaenoptera physalus</i>	Offshore ocean waters	E	Texas
Whale, humpback	<i>Megaptera novaeangliae</i>	Surface of the ocean	E	Texas
Wild-rice, Texas	<i>Zizania texana</i>	Gravelly, sandy to silty clays in relatively shallow water	E	Texas
Woodpecker, red-cockaded	<i>Picoides borealis</i>	Open pine forests with large, widely-spaced older trees	E	Texas
(No common name)	<i>Geocarpon minimum</i>	Grazing land	T	Texas
Bear, Louisiana black	<i>Ursus americanus luteolus</i>	Forest - mixed, woodland	T	Texas

T - Threatened
E - Endangered

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Cactus, Chisos Mountain hedgehog	<i>Echinocereus chisoensis</i> var. <i>chisoensis</i>	Desert grasslands or sparsely vegetated shrublands on gravelly flats and terraces	T	Texas
Cactus, Lloyd's Mariposa	<i>Echinomastus mariposensis</i>	Arid, gravelly, limestone-derived soils on gentle slopes	T	Texas
Cory cactus, bunched	<i>Coryphantha ramillosa</i>	Chihuahuan Desert succulent scrub on rocky slopes, ledges, and gravelly flats	T	Texas
Eagle, bald Sonoran Desert DPS	<i>Haliaeetus leucocephalus</i>	Coastlines, rivers, lakes, wet prairies, and coastal pine lands	T	Texas
Minnow, Devils River	<i>Dionda diaboli</i>	Creek medium river	T	Texas
Oak, Hinckley	<i>Quercus hinckleyi</i>	Arid, rocky, limestone-derived soils or limestone outcrops	T	Texas
Owl, Mexican spotted	<i>Strix occidentalis lucida</i>	Forest, woodlands	T	Texas
Plover, piping except Great Lakes watershed	<i>Charadrius melodus</i>	Wetlands	T	Texas
Salamander, San Marcos	<i>Eurycea nana</i>	Clear spring water coming from the headwaters of the San Marcos River	T	Texas
Sea turtle, green except where endangered	<i>Chelonia mydas</i>	Coasts, open sea	T	Texas
		Estuaries,		

Sea turtle, loggerhead	<i>Caretta caretta</i>	coastal streams and salt marshes	T	Texas
Shiner, Arkansas River Arkansas R. Basin	<i>Notropis girardi</i>	Unshaded channels of creeks and small to large rivers	T	Texas
Snake, Concho water	<i>Nerodia paucimaculata</i>	Bare rock/talus/scree	T	Texas
Sunflower, Pecos (=puzzle, =paradox)	<i>Helianthus paradoxus</i>	Desert wetlands	T	Texas

T - Threatened
E - Endangered

Texas Zone

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6.7 PIPELINE SENSITIVITY MAPS

[\(Click here for Sensitivity Maps\) 1](#)

Texas Zone

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6.7 PIPELINE SENSITIVITY MAPS

[\(Click here for Sensitivity Maps\) 2](#)

Texas Zone

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6.7 PIPELINE SENSITIVITY MAPS

[\(Click here for Sensitivity Maps\) 3](#)

Texas Zone

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6.7 PIPELINE SENSITIVITY MAPS

[\(Click here for Sensitivity Maps\) 4](#)

Texas Zone

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6.8 TACTICAL PLAN INDEX

SITE #	SITE NAME
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Texas Zone

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6.9 TACTICAL PLANS

Not Applicable

SECTION 7 SUSTAINED RESPONSE ACTIONS

Last revised: July 2011

7.1 Response Resources

7.1.1 Response Equipment

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

7.1.2 Response Equipment Inspection and Maintenance

7.1.3 Contracts, Contractor Equipment, and Labor

7.1.4 Command Post

Figure 7.1-2 - Command Post Checklist

7.1.5 Staging Area

7.1.6 Communications Plan

Figure 7.1-3 - Communications Checklist

7.2 Public Affairs

Figure 7.2-1 - Incident Fact Sheet

7.3 Site Security Measures

Figure 7.3-1 - Site Security Checklist

Figure 7.3-2 - Facility Security

7.4 Waste Management

Figure 7.4-1 - Waste Management Flow Chart

Figure 7.4-2 - General Waste Containment and Disposal Checklist

7.4.1 Waste Storage

Figure 7.4-3 - Temporary Storage Methods

SECTION 7
SUSTAINED RESPONSE ACTIONS, CONTINUED

7.4.2 Waste Transfer

7.4.3 Waste Disposal

Figure 7.4-4 - Facility Specific Disposal Locations

7.1 RESPONSE RESOURCES

7.1.1 Response Equipment

HAND TOOLS					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Basic Hand Tools (shovels, rakes, etc.)	Various	On Hand	Operational		
SORBENTS					
TYPE/YEAR	QUANTITY	ABSORPTION CAPACITY (gal)	STORAGE LOCATION	OPERATIONAL STATUS	
Adsorbent Materials	Small Quantity		On Hand	Operational	

***Note:** Response equipment is tested and deployed as described in **APPENDIX A** of the Spill Response Plan.

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

* USCG Classified OSRO for facility

COMPANY/CONTRACTOR	EQUIPMENT	RESPONSE TIME
*Garner Environmental Services Deer Park, TX	Full Response Capability "See FRP APPENDIX B"	6 hours
*Oil Mop Environmental Services, Inc. Pasadena, TX	Full Response Capability "See APPENDIX B"	6 hours
Talon LPE Midland, TX	Excavators, Backhoes, Skid Steers, etc.	6 hours

***Note:** All resources shall be capable of arriving at the Facility within the applicable response tier requirements. For high volume areas, Tier 1 = 6 hours, Tier 2 = 30 hours, and Tier 3 = 54 hours. For all other areas, Tier 1 = 12 hours, Tier 2 = 36 hours, and Tier 3 = 60 hours.

7.1.2 Response Equipment Inspection and Maintenance

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

Containment boom The Company does not own containment boom and uses OSROs listed in **APPENDIX B**.

Miscellaneous equipment Miscellaneous equipment, such as hand tools, earthen materials for dike construction, and sorbents are used to provide interim response until the spill response contractor arrives on-site. This equipment is not relied on to meet the spill response equipment requirements. Company-owned response equipment will be periodically inspected, but will not be deployed.

7.1.3 Contractors, Contractor Equipment, and Labor

- The Company's primary response contractors' names and phone numbers, as well as other companies who can provide spill response services are provided in **FIGURE 3.1-3**
- The Company has ensured by contract the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to the worst case discharge or the substantial threat of such discharge
- Contractors without USCG classification deploy and inspect boom to meet PREP guidelines. Company requires that these exercises are completed annually
- **APPENDIX B** contains evidence of contracts for the Company's primary response contractors and equipment lists of contractors without USCG classification

7.1.4 Command Post

In the event of a major spill or other emergency, both an off-site Emergency Operations

Center (EOC) and a Command Post may be established. For a minor emergency, only a Command Post may be established. Refer to **FIGURE 7.1-2** for guidelines in establishing a Command Post.

FIGURE 7.1-2 - COMMAND POST CHECKLIST

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

7.1.5 Staging Area

In a major spill response, numerous staging areas may be required to support containment and cleanup operations.

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

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

In addition, the staging area should:

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

Staging areas for this facility are located at:

7.1.6 Communications Plan

Normal Company communications to each facility are conducted via telephone lines, cellular telephones, satellite phones, two way radios, e-mail, fax machines, and pagers. Company owned communications equipment and quantities commonly used to address response communications are listed below:

Cellular Phones ??? All Personnel

Land Lines

Additional communications equipment (VHF portable radios with chargers and accessories, command post with UHF, VHF, single sideband, marine, aeronautical, telephone, and hard-line capability) may be provided by the Company or leased from a communications company in the area. Communications with government agencies, state police, and contractors can be conducted on portable radios. Refer to **FIGURE 7.1-3** for guidelines to setup communications.

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

FIGURE 7.1-3 - COMMUNICATIONS CHECKLIST

COMMUNICATIONS CHECKLIST	INITIALS	DATE/TIME STARTED	DATE/TIME COMPLETED
Develop a Communications Plan.			
Ensure adequate phone lines per staff element - contact local provider.			
Ensure adequate fax lines - contact local provider.			
Internet access necessary?			
Ensure recharging stations for cellular phones.			
VHF radio communications: <ul style="list-style-type: none"> • Establish frequencies • Assign call signs • Distribute radios • Establish communications schedule 			
Ensure recharging stations for VHF radios.			

Determine need for VHF repeaters.			
Ensure copy machine available.			
Ensure communications resource accountability.			
Ensure responders have capability to communicate with aircraft.			

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

7.2 PUBLIC AFFAIRS

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

- Guidelines for dealing with the media
- Incident Fact Sheet (**FIGURE 7.2-1**) - Use to provide relevant incident information to Public Relations Group.

GUIDELINES FOR DEALING WITH THE MEDIA

- You as a Company Manager are the most logical person for reporters to seek out for information
- Reporters will look elsewhere to find out what happened if you do not answer their questions; however, if you do not have this information or are not prepared to answer a particular question, say so then say when they can expect the answers to their questions (such as one hour)
- It is important to be courteous to all media representatives and to provide a safe place for them to wait until a company representative can meet them; you may need to provide an initial statement

FIGURE 7.2-1 - INCIDENT FACT SHEET

What occurred:
When (time):
Where (location):
What are hazards:
How is the situation being handled:

How many people involved:
Confirmed injuries/fatalities:
Treatment location:
Name of injured (release only after next of kin are notified):
Name of fatalities (release only after next of kin are notified):
What agencies have been notified:
On scene? (yes/no):
Who is in-charge:
Has outside help been requested:
Who:
On scene? (yes/no):
Is there danger to the plant:
Is there danger to the community:
What:
Is there an environmental hazard:
What is the environmental hazard:
What is being done to minimize environmental threat:
Is there a need for evacuation:

7.4 WASTE MANAGEMENT

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

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

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

- Development of a Site Safety and Health Plan (**SECTION 5.4**) addressing the proper PPE and waste handling procedures
- Development of a Disposal Plan (**SECTION 5.6**) in accordance with any federal, state, and/or local regulations. Facility-specific disposal locations for different types of materials are listed in **FIGURE 7.4.4**.
- Continuous tracking of oil disposition in order to better estimate amount of waste that could be generated over the short and long-term
- Organization of waste collection, segregation, storage, transportation, and proper disposal
- Minimization of risk of any additional pollution
- Regulatory review of applicable laws to ensure compliance and (if appropriate) obtain permits
- Documentation of all waste handling and disposal activities
- Disposal of all waste in a safe and approved manner

Good hazardous waste management includes:

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

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

Solid wastes such as sorbents, PPE, debris, and equipment will be characterized and disposed of in accordance by local, state, and federal regulations

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

FIGURE 7.4-1 - WASTE MANAGEMENT FLOW CHART

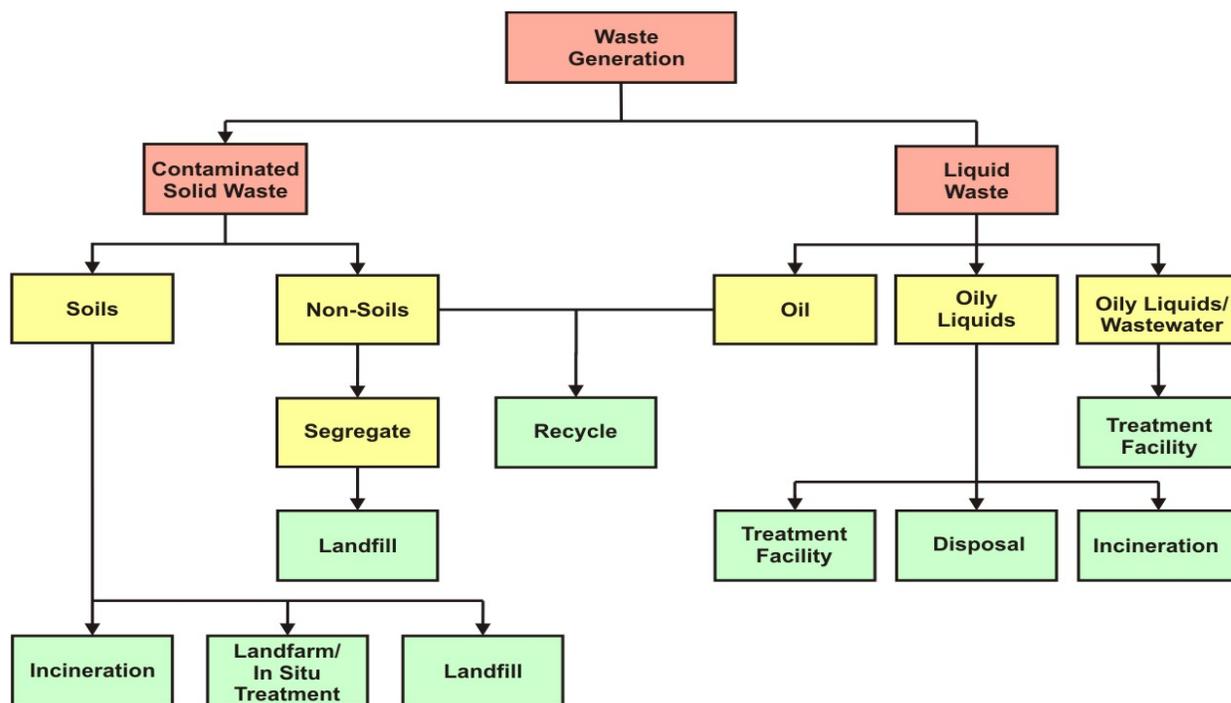


FIGURE 7.4-2 - GENERAL WASTE CONTAINMENT AND DISPOSAL CHECKLIST

CONSIDERATION	YES/NO/NA
Is the material being recovered a waste or reusable product?	
Has all recovered waste been containerized and secured so there is no potential for further leakage while the material is being stored?	

Has each of the discrete waste streams been identified and properly labeled?	
Has a representative sample of each waste stream been collected?	
Has the sample been sent to an approved laboratory for the appropriate analysis, (i.e. hazardous waste determination)?	
Has the appropriate waste classification and waste code number(s) for the individual waste streams been received?	
Has a temporary EPA identification number and generator number(s) been received, if they are not already registered with EPA?	
Have the services of a registered hazardous waste transporter been contracted, if waste is hazardous?	
If the waste is nonhazardous, is the transporter registered?	
Is the waste being taken to an approved disposal site?	
Is the waste hazardous or State Regulated Special Waste?	
If the waste is hazardous or State Regulated Special Waste, is a manifest being used?	
Is the manifest properly completed and has it been reviewed and approved by the Environmental Manager?	
Are all federal, state, and local laws/regulations being followed?	
Are all necessary permits being obtained?	
Has a Disposal Plan been submitted for approval/review?	
Has PPE and waste-handling procedures been included in the Site Safety and Health Plan to protect the health and safety of waste handling personnel?	

7.4.1 Waste Storage

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

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

- Geology
- Soil
- Surface water
- Covered materials
- Ground water
- Flooding
- Slope
- Capacity

- Climatic factor
- Toxic air emissions
- Access
- Land use
- Security
- Public contact

FIGURE 7.4-3 - TEMPORARY STORAGE METHODS

CONTAINMENT	PRODUCT						CAPACITY
	OIL	OIL/WATER	OIL/SOIL	OIL/DEBRIS (Small)	OIL/DEBRIS (Medium)	OIL/DEBRIS (Large)	
Drums	X	X	X				0.2-0.5 yd ³
Bags		X	X	X			1.0-2.0 yd ³
Boxes			X	X			1-5 yd ³
Open top rolloff	X	X	X	X	X	X	8-40 yd ³
Roll top rolloff	X	X	X	X	X	X	15-25 yd ³
Vacuum box	X	X					15-25 yd ³
Frac tank	X	X					500-20,000 gal
Poly tank	X	X					200-4,000 gal
Vacuum truck	X	X	X				2,000-5,000 gal
Tank trailer	X	X					2,000-4,000 gal
Barge	X	X					3,000+gal
Berm, 4 ft		X	X	X	X	X	1 yd ³
Bladders	X	X					25 gal-1,500 gal

7.4.2 Waste Transfer

In most oil spill response operations, it would be necessary to transfer recovered oil and oil debris from one point to another several times before the oil and oily debris are ultimately disposed of at a state approved disposal site.

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

Pumps

Rotary pumps, such as centrifugal pumps, may be used when transferring large

volumes of oil, but they may not be appropriate for pumping mixtures of oil and water. The extreme shearing action of centrifugal pumps tends to emulsify oil and water, thereby increasing the viscosity of the mixture and causing low, inefficient transfer rates.

The resultant emulsion would also be more difficult to separate into oil and water fractions. Lobe or "positive displacement" pumps work well on heavy, viscous oils, and do not emulsify the oil/water mixture. Double-acting piston and double acting diaphragm pumps are reciprocating pumps that may also be used to pump oily wastes.

Vacuum Systems

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

Belt / Screw Conveyors

Conveyor may be used to transfer oily wastes containing a large amount of debris. These systems can transfer weathered debris laden oil either horizontally or vertically for short distances but are bulky and difficult to operate.

Wheeled Vehicles

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

7.4.3 Waste Disposal

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

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

Recycling

Recycling involves processing discarded materials for another use.

Incineration

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

Landfill Disposal/Solidification

This technique entails burying the recovered oil in a approved landfill in accordance with regulatory procedures. Sludges and free liquids must be solidified prior to Landfill Disposal.

Treatment - for oily wastewater mixtures.

FIGURE 7.4-4 - FACILITY SPECIFIC DISPOSAL LOCATIONS

MATERIAL	DISPOSAL FACILITY	LOCATION
Recovered Product	Recovered product will be reinjected into the pipeline if practical	Into the pipeline
Contaminated Soil	Waste Management will be contracted for the contaminated soil, contaminated equipment, PPE, absorbents	
Contaminated Equipment	Waste Management will be contracted for the contaminated soil, contaminated equipment, PPE, absorbents	
Personnel Protective Equipment	Waste Management will be contracted for the contaminated soil, contaminated equipment, PPE, absorbents	
Decontamination Solutions	Waste Management will be contracted for the contaminated soil, contaminated equipment, PPE, absorbents	
Adsorbents and Spent Chemicals	Waste Management will be contracted for the contaminated soil, contaminated equipment, PPE, absorbents	

SECTION 8
DEMOBILIZATION / POST-INCIDENT REVIEW

Last revised: July 2011

8.1 Terminating the Response

8.2 Demobilization

Figure 8.2-1 - Demobilization Checklist

8.3 Post-Incident Review

Figure 8.3-1 - Standard Incident Debriefing Form

8.3.1 Final Spill Cleanup Report

8.1 TERMINATING THE RESPONSE

- The Company will work with Local, State and Federal Agencies (as appropriate) to determine the acceptable level of clean-up.
- Demobilize equipment and personnel first
- Consider which resources should be demobilized first; for example, berthing expenses can be saved by demobilizing out-of-area contractors before local ones
- Equipment may need both maintenance and decontamination before being demobilized
- All facilities (staging area, Command Post, etc.) should be returned to their pre-spill condition before terminating operations
- Determine what documentation should be maintained, where, and for how long
- Some activities will continue after the cleanup ends; examples include incident debriefing, bioremediation, NRDA studies, claims, and legal actions
- Consider expressing gratitude to the community, police department, fire department, and emergency crews for their work during the response

8.2 DEMOBILIZATION

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

FIGURE 8.2-1 - DEMOBILIZATION CHECKLIST

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

Operations Group Leaders before release of personnel or equipment.			
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8.3 POST-INCIDENT REVIEW

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

FIGURE 8.3-1 - STANDARD INCIDENT DEBRIEFING FORM

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

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

APPENDICES

A. TRAINING / EXERCISES

B. CONTRACTOR RESPONSE EQUIPMENT

C. HAZARD EVALUATION AND RISK ANALYSIS

D. CROSS-REFERENCES

E. ACRONYMS AND DEFINITIONS

F. ADDITIONAL INFORMATION

APPENDIX A TRAINING / EXERCISES

Last revised: July 2011

A.1 Exercise Requirements and Schedules

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

Figure A.1-2 - Exercise Requirements

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

Figure A.1-4 - PREP Drill and Exercise Log

A.2 Training Program

Figure A.2-1 - Training Requirements

Figure A.2-2 - PREP Training Program Matrix

A.1 EXERCISE REQUIREMENTS AND SCHEDULES

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

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

CORE COMPONENTS	DESCRIPTION
1. Notifications	Test the notifications procedures identified in the Area Contingency Plan (ACP) and the Spill Response Plan.
2. Staff mobilization	Demonstrate the ability to assemble the spill response organization identified in the ACP and the Spill Response Plan.
3. Ability to operate within the response management system described in the Plan: <ul style="list-style-type: none"> • Unified Command • Response management system 	<p>Demonstrate the ability of the spill response organization to work within a unified command.</p> <p>Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.</p>
4. Discharge control	Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
5. Assessment	Demonstrate the ability of the spill response organization

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

FIGURE A.1-2 - EXERCISE REQUIREMENTS

EXERCISE TYPE	EXERCISE CHARACTERISTICS
Facility/QI notification	<ul style="list-style-type: none"> • Conducted quarterly • The facility initiates mock spill notification to QI • The Qualified Individual documents time/date of notification, name, and phone number of individual contacted • Document in accordance with form in FIGURE A.1-3

Equipment deployment	<ul style="list-style-type: none"> Company relies on its response contractors for initial spill response. Therefore, the Company does not conduct equipment deployment exercises.
IMT tabletop	<ul style="list-style-type: none"> Conducted annually Tests IMT's response activities/responsibilities Documents Plan's effectiveness Must exercise worst case discharge scenario once every three years Must test all Plan components at least once every three years Document in accordance with form in FIGURE A.1-3
Unannounced	<ul style="list-style-type: none"> Company will either participate in unannounced tabletop exercise or equipment deployment exercise on an annual basis, if selected Company may take credit for participation in government initiated unannounced drill in lieu of drill required by PREP guidelines Plan holders who have participated in a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise
Area	<ul style="list-style-type: none"> An industry plan holder that participates in an Area Exercise would not be required to participate in another Area Exercise for a minimum of six years
OTHER EXERCISE CONSIDERATIONS	
Drill program evaluation procedures	<ul style="list-style-type: none"> Post-exercise meetings to discuss positive items, areas for improvement, and to develop action item checklist to be implemented later
Records of drills	<ul style="list-style-type: none"> Company will maintain exercise records for five years following completion of each exercise Records will be maintained in the Training/Exercise tool in the electronic interface and at the Facility office Company will verify appropriate records are kept for each spill response contractor listed in Plan as required by PREP guidelines (annual equipment deployment drill, triennial unannounced drill, etc.)

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

Retain this form for a minimum of five years.

EQUIPMENT DEPLOYMENT EXERCISE

1. Date(s) performed:

2. Exercise or actual response?

3. Deployment location(s):

4. Time started:

Time completed:

5. Equipment deployed was:

- Facility-owned
 Oil spill organization-owned. If so, which OSRO?
 Both

6. List type and amount of all equipment (e.g. boom and skimmers) deployed and number of support personnel employed:

7. Describe goals of the equipment deployment and list any Area Contingency Plan strategies tested. (Attach a sketch of equipment deployments and booming strategies:

8. For deployment of facility-owned equipment, was the amount of equipment deployed <u>at least</u> the amount necessary to respond to you facility's average most probably spill or small spill?
Was the equipment in its intended operating environment?

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

9. For the deployment of OSRO-owned equipment, was a representative sample (at least 1000 feet of each boom type and at least one of each skimmer type) deployed
Was the equipment deployed in its intended operating environment?
10. Are all facility personnel that are responsible for response operations involved in a comprehensive training program, and all pollution response equipment involved in a comprehensive maintenance program?
If so, describe the program:
Date of last equipment inspection:
11. Did personnel who will be responsible for its deployment in the event of an actual

spill deploy the equipment?

12. Was all deployment equipment operational? If not, why not?

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

- Notifications - proper notification were able to be made
- Staff Mobilization - ability to assemble the spill response team
- Ability to operate within the response management system described in the plan
- Discharge Control - ability to stop and control the spill
- Assessment - ability of the response team to provide initial assessment
- Containment - ability of the response team to contain the spill
- Recovery - ability to recover spilled material on both land and water
- Protection - ability to recognize/identify and protect sensitive areas
- Disposal - Material must be disposed of in accordance with local, state, and federal laws
- Communications - ability to effectively communicate with response team
- Transportation - ability to use multi-modes of transportation to respond to the spill
- Personnel Support - ability to provide necessary support of response personnel
- Equipment Maintenance and Support - ability to maintain and support response equipment
- Procurement - ability to establish effective procurement system
- Documentation - ability to properly document operational and support aspects of response

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

4. Time Started:
Time Completed:
5. Response plan scenario used (check one): <input type="checkbox"/> Average most probable or small discharge <input type="checkbox"/> Maximum most probable or medium discharge <input type="checkbox"/> Worst case Discharge Size of (simulated) spill _____ bbls/gals
6. Describe how each of the following objectives were exercised:
a. Spill management's team knowledge of oil-spill response plan:
b. Proper notifications:
c. Communications system:

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

SPILL MANAGEMENT TEAM TABLETOP EXERCISE, CONTINUED

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, other applicable agencies (Use of Incident Command System):

f. Spill management team's ability to access sensitive site resource information and the Area Contingency Plan:

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

- Notifications - proper notification were able to be made
- Staff Mobilization - ability to assemble the spill response team
- Ability to operate within the response management system described in the plan
- Discharge Control - ability to stop and control the spill
- Assessment - ability of the response team to provide initial assessment
- Containment - ability of the response team to contain the spill
- Recovery - ability to recover spilled material on both land and water
- Protection - ability to recognize/identify and protect sensitive areas
- Disposal - Material must be disposed of in accordance with local, state, and federal laws
- Communications - ability to effectively communicate with response team
- Transportation - ability to use multi-modes of transportation to respond to the spill
- Personnel Support - ability to provide necessary support of response personnel
- Equipment Maintenance and Support - ability to maintain and support response equipment
- Procurement - ability to establish effective procurement system
- Documentation - ability to properly document operational and support aspects of response

3. Facility initiating Exercise:

4. Name of person notified:

Is this person identified in your response plan as a qualified individual (QI) or designee?

5. Time initiated:

Time which qualified individual or designee responded:

6. Method used to contact:

- Telephone
- Pager
- Radio
- Other:

7. Description of notification procedure:

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

- Notifications - proper notification were able to be made
- Staff Mobilization - ability to assemble the spill response team
- Ability to operate within the response management system described in the plan
- Discharge Control - ability to stop and control the spill
- Assessment - ability of the response team to provide initial assessment
- Containment - ability of the response team to contain the spill
- Recovery - ability to recover spilled material on both land and water
- Protection - ability to recognize/identify and protect sensitive areas
- Disposal - Material must be disposed of in accordance with local, state, and federal laws
- Communications - ability to effectively communicate with response team
- Transportation - ability to use multi-modes of transportation to respond to the spill
- Personnel Support - ability to provide necessary support of response personnel
- Equipment Maintenance and Support - ability to maintain and support response equipment
- Procurement - ability to establish effective procurement system
- Documentation - ability to properly document operational and support aspects of response

FIGURE A.1-4 - PREP DRILL AND EXERCISE LOG

DRILL / EXERCISE	DATE COMPLETED			
	2011	2012	2013	2014
Annual Tabletop Drill				
1st Semi-Annual Deployment				
2nd Semi-Annual Deployment				
Unannounced Drill <i>(one of the above drills must be conducted unannounced)</i>				
Worst Case Discharge Scenario				
1st Quarterly QI Notification				
2nd Quarterly QI Notification				
3rd Quarterly QI Notification				
4th Quarterly QI Notification				
After Hours QI Notifications <i>(One of the above QI notifications must be made after normal business hours)</i>				
FRP Employee Training				
PREP Core Components 0 During each triennial cycle (3yrs), all components must be exercised at least once.				
Notifications - proper notification were able to be made				
Staff Mobilization - ability to assemble the spill response team				
Ability to operate within the response management system described in the plan				
Discharge Control - ability to stop and control the spill				
Assessment - ability of the response team to provide initial assessment				
Containment - ability of the response team to contain the spill				
Recovery - ability to recover spilled material on both land and water				
Protection - ability to recognize/identify and protect sensitive areas				

Disposal - Material must be disposed of in accordance with local, state, and federal laws				
Communications - ability to effectively communicate with response team				
Transportation - ability to use multi-modes of transportation to respond to the spill				
Personnel Support - ability to provide necessary support of response personnel				
Equipment Maintenance and Support - ability to maintain and support response equipment				
Procurement - ability to establish effective procurement system				
Documentation - ability to properly document operational and support aspects of response				

A.2 TRAINING PROGRAM

FIGURE A.2-1 provides training requirements for spill responders. **FIGURE A.2-2** provides the program matrix.

FIGURE A.2-1 - TRAINING REQUIREMENTS

TRAINING TYPE	TRAINING CHARACTERISTICS
Training in use of spill response plan	<ul style="list-style-type: none"> All field personnel will be trained to properly report/monitor spills Plan will be reviewed annually with Company personnel responsible for responding to a spill and for implementation of the plan will be trained annually. The Personnel Response Training Log is maintained on-site.
OSHA training requirements	<ul style="list-style-type: none"> All Company responders designated in Plan must have 24 hours of initial spill response training (24-hr HAZWOPER) Laborers having potential for minimal exposure must have 24 hours of initial oil spill response instruction and eight hours of actual field experience Spill responders having potential exposure to hazardous substances at levels exceeding permissible exposure limits must have 40 hours of initial training offsite and 24 hours of actual field experience On-site management/supervisors required to receive same training as equipment

	<p>operators/general laborers plus eight hours of specialized hazardous waste management training</p> <ul style="list-style-type: none"> Managers/employees require eight hours of annual refresher training
Incident Management Team personnel training	<ul style="list-style-type: none"> See recommended PREP Training Matrix (<u>FIGURE A.2-2</u>)
Training for casual laborers or volunteers	<ul style="list-style-type: none"> Company will not use casual laborers/volunteers for operations requiring HAZWOPER training
Wildlife	<ul style="list-style-type: none"> Only trained personnel approved by USFWS and appropriate state agency will be used to treat oiled wildlife
Training documentation and record maintenance	<ul style="list-style-type: none"> Training activity records will be retained five years for all personnel following completion of training Company will retain training records indefinitely for individuals assigned specific duties in the Plan Training records will be maintained on-site at the Facility office

FIGURE A.2-2 - PREP TRAINING PROGRAM MATRIX

Note: The following are recommended training topics.

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	INCIDENT MANAGEMENT TEAM (IMT)	FACILITY PERSONNEL
Notification procedures and requirements for facility owners or operators; internal response organizations; federal and state agencies; and contracted oil spill removal organizations (OSROs) and the information required for those organizations	X	X	X
Communication system used for the notifications	X	X	X
Information on the products stored, used, or transferred by the facility, including familiarity with the material safety data sheets (MSDS), special handling procedures, health and safety hazards, spill and fire fighting procedures	X	X	X

Procedures the facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with internal or external cargo transfers, storage, or use	X		
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or prevent an oil discharge	X	X	X
Operational capabilities of the contracted OSRO's to respond small, medium, and large discharges	X	X	X
Responsibilities and authority of the Qualified Individual (QI) as described in the Spill Response Plan and Company response organization	X	X	X
The organization structure that will be used to manage the response actions including: <ul style="list-style-type: none"> • Command and control • Public information • Safety • Liaison with government agencies • Spill response operations • Planning • Logistics support • Finance 	X	X	X
The responsibilities and duties of each Incident Management Team (IMT) within the organization structure	X	X	
The role of the QI in the post discharge review of the Plan to evaluate and validate its effectiveness	X		
The Area Contingency Plan (ACP)(if applicable) for the area in which the facility is located	X	X	X
Roles and responsibilities of federal and state agencies in pollution response	X	X	X

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

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	INCIDENT MANAGEMENT TEAM (IMT)	FACILITY PERSONNEL
Available response resources identified in the Plan	X	X	
Contracting and ordering procedures to acquire OSRO resources identified in the Plan	X	X	
OSHA requirements for worker health and safety (29 CFR 1910.120)	X	X	X
Incident Management System/Unified Command System	X	X	
Public affairs	X	X	
Crisis management	X	X	
Procedures for obtaining approval for dispersant use or in-situ burning of the spill	X		
Oil spill trajectory analyses	X		
Sensitive biological areas	X	X	
This training procedure as described in the Plan for members of the IMT	X	X	
Procedures for the post discharge review of the plan to evaluate and validate its effectiveness	X	X	
Basic information on spill operations and oil spill clean-up technology including: <ul style="list-style-type: none"> • Oil containment • Oil recovery methods and devices • Equipment limitations and uses • Shoreline cleanup and protection • Spill trajectory analysis • Use of dispersants, in-situ burning, bioremediation • Waste storage and disposal considerations 	X	X	
Hazard recognition and evaluation	X	X	
Site safety and security procedures	X	X	
Procedures for directing the deployment and use of spill response equipment, as applicable to		X	

designated job responsibilities			
Specific procedures to shut down effected operations			X
Procedures to follow in the event of discharge, potential discharge, or emergency involving the following equipment or scenarios: <ul style="list-style-type: none"> • Tank overfill • Tank rupture • Piping or pipeline rupture • Piping or pipeline leak, both under pressure or not under pressure, if applicable • Explosion or fire • Equipment failure • Failure of secondary containment system 			X
QI's name and how to contact him or her		X	X

APPENDIX B
CONTRACTOR RESPONSE EQUIPMENT

Last revised: July 2011

B.1 Cooperatives and Contractors

B.1.1 OSRO Classification

Figure B.1-1 - Evidence of Contracts and Equipment Lists

B.1 COOPERATIVES AND CONTRACTORS

The Company has contracted with additional Oil Spill Removal Organizations (OSROs) to provide personnel and equipment in the event of a spill. The classification, response capabilities, and equipment are described below. **FIGURE B.1-1** provides evidence of contracts with OSROs and equipment lists for contractors without USCG classification. **FIGURE 7.1-1** provides local response contractor's equipment lists and response times.

B.1.1 OSRO Classification

The OSRO classification process was developed by the U.S. Coast Guard (USCG) to provide guidelines to enable USCG and plan preparers to evaluate an OSRO's potential to respond to oil spills. Plan holders that utilize USCG classified OSRO services are not required to list response resources in their plans.

The following is a listing of the USCG classified OSROs that may respond to incidents for areas listed in this Plan. For a detailed listing of USCG classified OSROs and other contractors by terminal, refer to **FIGURE 3.1-3** and **7.1-1**.

COMPANY / CONTRACTOR	APPLICABLE COTP ZONE (S)	USCG CLASSIFICATIONS										RESPONSE TIME
			Facilities				Vessels					
			MM	W1	W2	W3	MM	W1	W2	W3		
Garner Environmental Services 1717 West 13th Street Deer Park TX 77536	Houston-Galveston	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓		
		Inland	✓	✓	✓	✓	✓	✓	✓	✓		
		Open Ocean			✓	✓				✓	✓	
		Offshore			✓	✓				✓	✓	
		Nearshore			✓	✓				✓	✓	
		Great Lakes										
Oil Mop Environmental Services, Inc. 450 Preston Rd. Pasadena TX 77503	Houston-Galveston	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓		
		Inland	✓	✓	✓	✓	✓	✓	✓	✓		
		Open Ocean										
		Offshore										
		Nearshore										
		Great Lakes										

The following contractors are retained by the Company, but are not USCG classified OSROs within this Area:

- Talon LPE
2901 State Highway 349
Midland, TX
79706

FIGURE B.1-1 - EVIDENCE OF CONTRACTS AND EQUIPMENT LISTS

- Garner Environmental Services, Deer Park, TX
- Oil Mop Environmental Services, Inc., Pasadena, TX
- Talon LPE, Midland, TX

APPENDIX C
HAZARD EVALUATION AND RISK ANALYSIS

Last revised: July 2011

C.1 Spill Detection

C.2 Worst Case Discharge Scenario

C.3 Planning Volume Calculations

C.4 Spill Volume Calculations

C.5 Pipeline - Abnormal Conditions

C.6 Product Characteristics and Hazards

Figure C.6-1- Summary of Commodity Characteristics

C.1 SPILL DETECTION

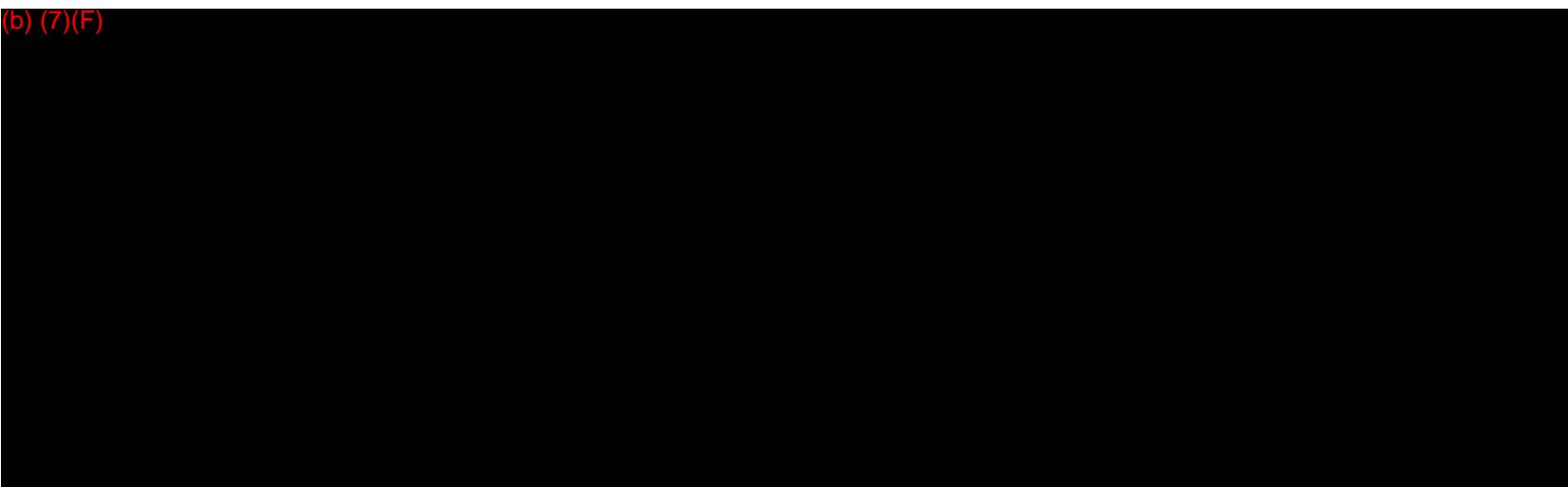
Detection

Detection of a discharge from the Company system may occur in a number of ways including:

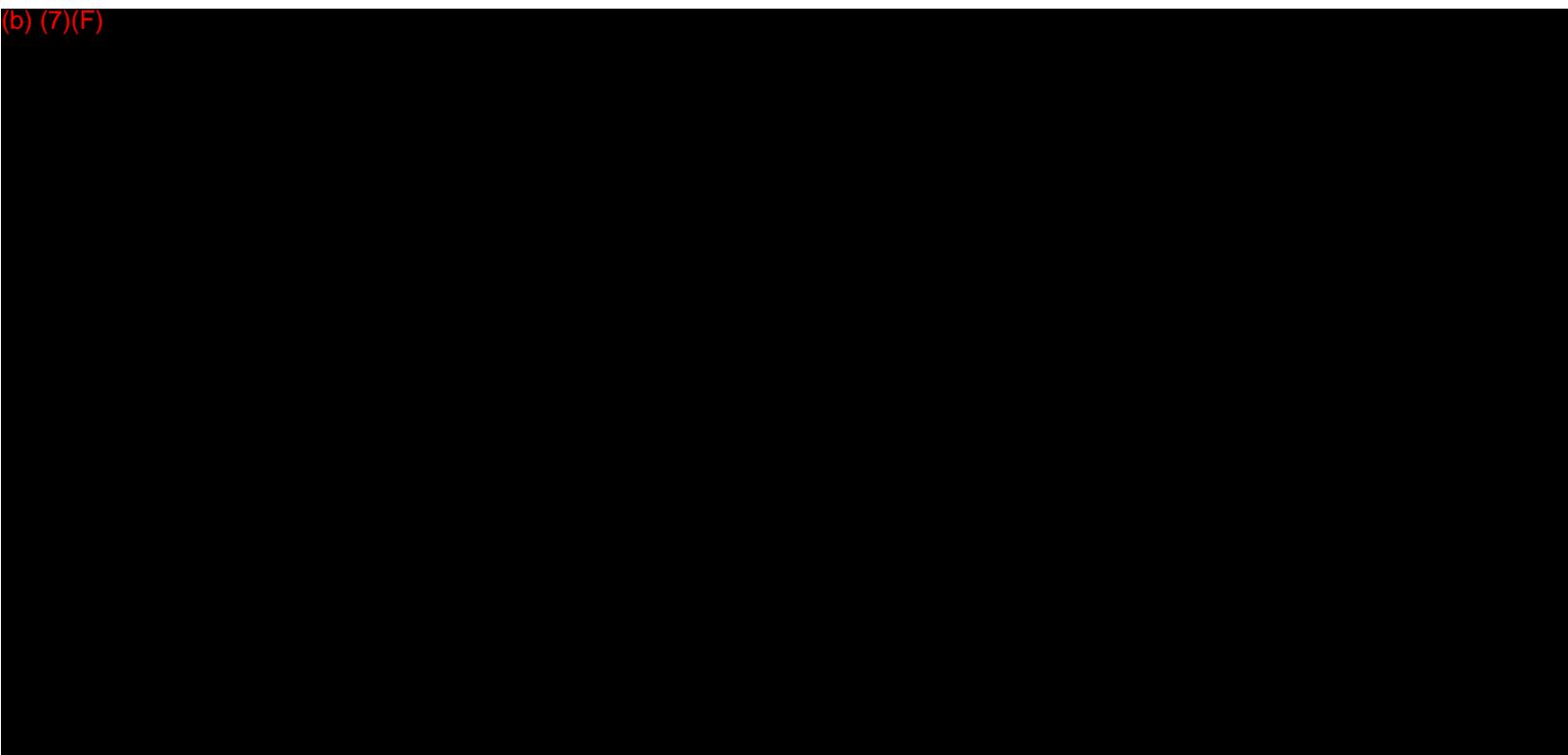
- Automated detection by the Supervisory Control and Data Acquisition (SCADA) system
- Visual detection by Company personnel
- Visual detection by the public

Automated detection

(b) (7)(F)



(b) (7)(F)



from any location should the satellite network become incapacitated.

(b) (7)(F)

Visual detection by Company personnel

Aerial patrol flights will be made on a periodic basis. The intent of the patrol is to observe the area directly over the pipeline right-of-way for leaks, exposed pipes, washes, missing markers and other unusual conditions. Construction on either side of the pipeline right-of-way is also monitored.

Discharges to the land or surface waters may also be detected by Company personnel during regular operations and inspections. Should a leak be detected, the appropriate actions are taken including but not limited to:

- Notifications as per **SECTION 3**
- A preliminary assessment of the incident area
- If appropriate, initiate initial response actions per **SECTION 2**

FIGURE 2.1-1 provides a checklist for initial response actions.

Visual detection by the public

Right-of-way marker signs are installed and maintained at road crossing and other noticeable points and provide an Operations Control 24-hour number for reporting emergency situations. The Company also participates in the "call before you dig" or "One Call" utility notification services which can be contacted to report a leak and determine the owner/operator of the pipeline. If the notification is made to a local office or pump station, the Company representative receiving the call will generally implement the following actions:

- Notify the Operations Control and region/designated office
- Dispatch Company field personnel to the site to confirm discharge and conduct preliminary assessment
- Notify their immediate area supervisor and provide assessment results

Pipeline shutdown

If any of these situations are outside the expected values, abnormal conditions are considered to exist. If abnormal conditions exist, Operations Control will take the appropriate actions to ensure that a release does not occur. If a discharge has occurred, Operations Control will take actions to limit the magnitude. In either case, appropriate actions taken by Company personnel could include, but are not limited to:

- Shut down effected line segment if there is an indication of a leak
- Isolate line segment
- Depressurize line
- Start internal and external notifications
- Mobilize additional personnel as required

C.2 WORST CASE DISCHARGE (WCD) SCENARIO

The equipment and personnel to respond to a spill are available from several sources and are provided with the equipment and contractors in **SECTION 7** and **APPENDIX B**. The following sections are discussions of these scenarios.

APPENDIX C.4 provides worst case discharge calculations. Discussion of this scenario is as follows:

Upon discovery of a spill, the following procedures would be followed:

1. The First Responder would notify Supervisory Personnel and notifications would be

initiated in accordance with **FIGURE 2.1-1**.

2. The Area Supervisor/Manager of Operations would assume the role of Incident Commander until relieved and would initiate response actions and notifications in accordance with **SECTION 2**. Among those actions would be to:
 - Conduct safety assessment in accordance with **FIGURE 2.1-1** and evacuate personnel as needed in accordance with **SECTION 2.2**
 - Direct facility responders to shut down ignition sources
 - Direct facility personnel to position resources in accordance with **SECTION 6.9**
 - Direct response contractors to contain and clean-up spill.
 - Complete spill report form in accordance with **FIGURE 3.1-2**
 - Ensure regulatory agencies are notified (**FIGURE 3.1-3**)
3. If this were a small or medium spill, the Qualified Individual/Incident Commander may elect for the First Responder to remain the Incident Commander or to activate selected portions of the Incident Management Team. However, for a large spill, the Qualified Individual would assume the role of Incident Commander and would activate the entire Incident Management Team in accordance with activation procedures described in **SECTION 4.2**.
4. The Incident Commander should then initiate spill assessment procedures including surveillance operations, trajectory calculations, and spill volume estimating in accordance with **SECTION 2.1.3**.
5. The Incident Commander should then utilize checklists in the **SECTION 4.5** as a reminder of issues to address. The primary focus would be to establish incident priorities and objectives and to brief staff accordingly.
6. The Incident Management Team should develop the following plans, as appropriate (some of these plans may not be required during a small or medium spill):
 - Site Safety and Health (**SECTION 5.4**)
 - Site Security (**SECTION 5.7**)
 - Incident Action (**SECTION 5.3.2**)
 - Decontamination (**SECTION 5.5**)
 - Disposal (**SECTION 5.6**)
 - Demobilization (**SECTION 5.8**)

Plan templates are included in **SECTION 5**.

7. The response would continue until an appropriate level of cleanup is obtained.

C.3 PLANNING VOLUME CALCULATIONS

Once the worst case discharge volume has been calculated, response resources must be identified to meet the requirements of 49 CFR 194.105(b). Calculations to determine sufficient amount of response equipment necessary to respond to a worst case discharge is described below. A demonstration of the planning volume calculations is provided below.

C.4 SPILL VOLUME CALCULATIONS

DOT/PHMSA portion of pipeline/facilities

The worst case discharge (WCD) for the DOT portion of the pipeline and facilities, as defined in 49 CFR 194.105(b), as the largest volume of the following:

1. The pipeline's maximum shut-down response time in hours (based on historic discharge data or in the absence of such data, the operators best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or
2. The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or
3. If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.

Under PHMSA's current policy, operators are allowed to reduce the worst case discharge volume derived from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the worst case discharge volume based on breakout tanks in the response zones as follows:

SPILL PREVENTION MEASURES	PERCENT REDUCTION ALLOWED
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30	50%
Tank built, rebuilt, and repaired according to API Std 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to	5%

NFPA/API RP 2350	
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%*
Maximum allowable credit or reduction	75%

* Note: The facilities do not have tertiary containment.

The worst case discharge for each response zone was based on the largest volume of the three criteria given above.

The Company has determined the worst case discharge volume to be a catastrophic line failure of the largest line section with the greatest drainage capacity in each response zone or 30 percent of the volume of the largest tank in each zone.

Texas Zone

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The line sections with the highest throughput and largest drainage volume between block valves on pump stations were chosen to calculate the pipeline worst case discharge. Although the entire discharge volume of each line was used for the worst case discharge, in an actual spill event, it would take days to drain the line completely. The line would be sealed early in the response effort.

All of the breakout tanks in the pipeline system are within adequate secondary containment, therefore, the discharge volumes for the largest tank was determined by adjusting the total tank volume downward by 50% per the company guidelines.

Considering the volume of release from a line break compared to that of historic discharge in each zone and to the volumes released from a tank failure, the tank failure was found to represent the worst case scenario.

The maximum historic discharge is not applicable for WCD covered by this plan. Given below are the tank and pipeline WCD calculations for this plan.

The worst case discharge for each pipeline segment is the largest breakout tank. These tank volumes are as follows:

(b) (7)(F)

Texas Zone

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The worst case tank volume is calculated as follows:

Largest tank x Credit for containment tank standards = Tank standards credit

The Company has implemented all of the spill prevention measures, listed on the previous page, except tertiary containment. Therefore, the percent reduction allowed for credit equals 50% and the worst case discharge volume is 50% of the total volume.

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	HAZARD WARNING STATEMENT
Crude Oil	Appropriate product name	1	2	C, H ₂ S	0	May contain benzene, a carcinogen, or hydrogen sulfide, an extremely flammable and toxic gas, which is harmful if inhaled; flash point varies widely. May cause CNS depression.
Condensate	Appropriate product name	1	3	C, H ₂ S	0	Long-term, repeated exposure may cause cancer and blood and nervous system damage. Contains hydrogen sulfide (H ₂ S); inhalation is fatal. Contains benzene, a cancer hazard.
Health Hazard	4 = Extremely Hazardous 3 = Hazardous 2 = Warning 1 = Slightly Hazardous 0 = No Unusual Hazard			Fire Hazard (Flash Point)	4 = Below 73? F, 22? C 3 = Below 100? F, 37? C 2 = Below 200? F, 93? C 1 = Above 200? F, 93? C 0 = Will not burn	
Special Hazard	A = Asphyxiant C = Contains Carcinogen W = Reacts with Water Y = Radiation Hazard COR = Corrosive OX = Oxidizer H₂S = Hydrogen Sulfide P = Contents under Pressure T = Hot Material			Reactivity Hazard	4 = May Detonate at Room Temperature 3 = May Detonate with Heat or Shock 2 = Violent Chemical Change with High Temperature and Pressure 1 = Not Stable if Heated 0 = Stable	

APPENDIX D
CROSS-REFERENCES

Last revised: July 2011

DOT / PHMSA Cross-Reference

OSHA Cross-Reference

DOT / PHMSA CROSS-REFERENCE

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Part 194.103 Significant and substantial harm; operator's statement.	
<p>a. Each operator shall submit a statement with its response plan, as required by §§194.107 and 194.113, identifying which line sections in a response zone can be expected to cause significant and substantial harm to the environment in the event of a discharge of oil into or on the navigable waters or adjoining shorelines.</p>	<p><u>Figure 1-2</u></p>
<p>b. If an operator expects a line section in a response zone to cause significant and substantial harm, then the entire response zone must, for the purpose of response plan review and approval, be treated as if it is expected to cause significant and substantial harm. However, an operator will not have to submit separate plans for each line section.</p>	<p><u>Figure 1-2</u></p>
<p>c. A line section can be expected to cause significant and substantial harm to the environment in the event of a discharge of oil into or on the navigable waters or adjoining shorelines if; the pipeline is greater than 65/8 inches (168 millimeters) in outside nominal diameter, greater than 10 miles (16 kilometers) in length, and the line section—</p> <ol style="list-style-type: none"> 1. Has experienced a release greater than 1,000 barrels (159 cubic meters) within the previous five years, 2. Has experienced two or more reportable releases, as defined in ?195.50, within the previous five years, 3. Containing any electric resistance welded pipe, manufactured prior to 1970, operates at a maximum operating pressure established under ?195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe, 4. Is located within a 5 mile (8 kilometer) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes, or 5. Is located within a 1 mile (1.6 kilometer) radius of potentially affected environmentally sensitive areas, and could reasonably be expected to reach these areas. 	<p><u>Figure 1-2</u></p>
Part 194.107 General response plan requirements.	

<p>a. Each response plan must include procedures and a list of resources for responding, to the maximum extent practicable, to a worst case discharge and to a substantial threat of such a discharge. The “substantial threat” term is equivalent to abnormal operations outlined in 49 CFR 195.402(d). To comply with this requirement, an operator can incorporate by reference into the response plan the appropriate procedures from its manual for operations, maintenance, and emergencies, which is prepared in compliance with 49 CFR 195.402.</p>	<p>Section 7.1.1, Appendix B, Appendix C.2</p>
<p>b. An operator must certify in the response plan that it reviewed the NCP and each applicable ACP and that its response plan is consistent with the NCP and each applicable ACP as follows:</p>	<p>Section 1.1</p>
<p>1. As a minimum to be consistent with the NCP a facility response plan must:</p>	<p>Section 1.1</p>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
<p>i. Demonstrate an operator's clear understanding of the function of the Federal response structure, including procedures to notify the National Response Center reflecting the relationship between the operator's response organization's role and the Federal On Scene Coordinator's role in pollution response;</p>	<p>Figure 2.1-1, Figure 3.1-3</p>
<p>ii. Establish provisions to ensure the protection of safety at the response site; and</p>	<p>Section 5.4</p>
<p>iii. Identify the procedures to obtain any required Federal and State permissions for using alternative response strategies such as in-situ burning and dispersants as provided for in the applicable ACPs; and</p>	<p>Section 6</p>
<p>2. As a minimum, to be consistent with the applicable ACP the plan must:</p>	<p>Section 1.1</p>
<p>i. Address the removal of a worst case discharge and the mitigation or prevention of a substantial threat of a worst case discharge;</p>	<p>Figure 2.1-1, Section 2.1.1, Appendix C.1, Appendix C.2</p>

ii. Identify environmentally and economically sensitive areas;	<u>Section 6.7</u>
iii. Describe the responsibilities of the operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge; and	<u>Figure 2.1-1, Section 2.1.1, Section 4.3, Appendix C.1, Appendix C.2</u>
iv. Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	<u>Section 6</u>
c. Each response plan must include:	
1. A core plan consisting of—	
i. An information summary as required in §194.113,	<u>Figure 1-2</u>
ii. Immediate notification procedures,	<u>Section 3</u>
iii. Spill detection and mitigation procedures,	<u>Section 2.1.1, Appendix C.1</u>
iv. The name, address, and telephone number of the oil spill response organization, if appropriate,	<u>Figure 3.1-3, Appendix B</u>
v. Response activities and response resources,	<u>Section 2, Section 7.1.1, Appendix B, Appendix C.2</u>
vi. Names and telephone numbers of Federal, State and local agencies which the operator expects to have pollution control responsibilities or support,	<u>Figure 3.1-3</u>
vii. Training procedures,	<u>Appendix A</u>
viii. Equipment testing,	<u>Section 7.1.2, Figure A.1-2</u>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION

<p>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.</p>	<p>Appendix A</p>
<p>x. Plan review and update procedures;</p>	<p>Section 1.2</p>
<p>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</p>	<p>Figure 1-2</p>
<p>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.</p>	<p>Figure 3.1-3, Section 4</p>
<p>Part 194.109 Submission of state response plans.</p>	
<p>a. In lieu of submitting a response plan required by ?194.103, an operator may submit a response plan that complies with a state law or regulation, if the state law or regulation requires a plan that provides equivalent or greater spill protection than a plan required under this part.</p>	<p>N/A</p>
<p>b. A plan submitted under this section must</p> <ol style="list-style-type: none"> 1. Have an information summary required by §194.113; 2. List the names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s); and 3. Ensure through contract or other approved means the necessary private personnel and equipment to respond to a worst case discharge or a substantial threat of such a discharge. 	<p>N/A</p>

Part 194.111 Response plan retention.	
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, supervisors' vehicles, or spill response trailers.	Figure 1-1
b. Each operator shall provide a copy of its response plan to each qualified individual.	Figure 1-1

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Part 194.113 Information summary.	
a. The information summary for the core plan, required by ? 194.107, must include: <ol style="list-style-type: none"> 1. The name and address of the operator; and 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). 	Figure 1-2
b. The information summary for the response zone appendix, required in ?194.107, must include: <ol style="list-style-type: none"> 1. The information summary for the core plan; 2. The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s); 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; 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; 5. The basis for the operator's determination of significant and substantial harm; and 6. The type of oil and volume of the worst case discharge. 	Figure 1-2
Part 194.115 Response resources.	

<p>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.</p>	<p><u>Figure 3.1-3, Section 7.1.1, Appendix B, Appendix C.1, Appendix C.2</u></p>												
<p>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, as follows:</p> <table border="1"> <thead> <tr> <th></th> <th>Tier 1</th> <th>Tier 2</th> <th>Tier 3</th> </tr> </thead> <tbody> <tr> <td>High volume area</td> <td>6 hrs</td> <td>30 hrs</td> <td>54 hrs.</td> </tr> <tr> <td>All other areas</td> <td>12 hrs</td> <td>36 hrs</td> <td>60 hrs.</td> </tr> </tbody> </table>		Tier 1	Tier 2	Tier 3	High volume area	6 hrs	30 hrs	54 hrs.	All other areas	12 hrs	36 hrs	60 hrs.	<p><u>Figure 3.1-3, Section 7.1.1, Appendix B</u></p>
	Tier 1	Tier 2	Tier 3										
High volume area	6 hrs	30 hrs	54 hrs.										
All other areas	12 hrs	36 hrs	60 hrs.										

Part 194.117 Training.

<p>a. Each operator shall conduct training to ensure that:</p>	
<p>1. All personnel know—</p> <ul style="list-style-type: none"> i. Their responsibilities under the response plan, ii. The name and address of, and the procedure for contacting, the operator on a 24-hour basis, and iii. The name of, and procedures for contacting, the qualified individual on a 24-hour basis; 	<p><u>Appendix A</u></p>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
<p>2. Reporting personnel know—</p> <ul style="list-style-type: none"> i. The content of the information summary of the response plan, ii. The toll-free telephone number of the National Response Center, and iii. The notification process; and 	<p><u>Appendix A</u></p>
<p>3. Personnel engaged in response activities know—</p> <ul style="list-style-type: none"> i. The characteristics and hazards of the oil discharged, 	<p><u>Appendix A</u></p>

<ul style="list-style-type: none"> ii. The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions, iii. The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage, and iv. The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus. 	
<p>b. Each operator shall maintain a training record for each individual that has been trained as required by this section. These records must be maintained in the following manner as long as the individual is assigned duties under the response plan:</p> <ul style="list-style-type: none"> 1. Records for operator personnel must be maintained at the operator's headquarters; and 2. Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator. 	<p>Figure A.1-2</p>
<p>c. Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the Occupational Safety and Health Administration (OSHA) standards for emergency response operations in 29 CFR 1910.120, including volunteers or casual laborers employed during a response who are subject to those standards pursuant to 40 CFR part 311.</p>	<p>Figure A.2-1</p>
<p>Part 194.119 Submission and approval procedures.</p>	
<p>a. Each operator shall submit two copies of the response plan required by this part. Copies of the response plan shall be submitted to: Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, PHP 80, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001. Note: Submission of plans in electronic format is preferred.</p>	<p>Figure 1-1</p>
<p>Part 194.121 Response plan review and update procedures.</p>	
<p>a. Each operator shall update its response plan to address new or different operating conditions or information. In addition, each operator shall review its response plan in full at least every 5 years from the date of the last submission or the last approval as follows:</p>	<p>Section 1.1</p>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
1. For substantial harm plans, an operator shall resubmit its response plan to OPS every 5 years from the last submission date.	Section 1.1
2. For significant and substantial harm plans, an operator shall resubmit every 5 years from the last approval date.	Section 1.1
<p>b. If a new or different operating condition or information would substantially affect the implementation of a response plan, the operator must immediately modify its response plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA. Examples of changes in operating conditions that would cause a significant change to an operator's response plan are:</p> <ol style="list-style-type: none"> 1. An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan; 2. Relocation or replacement of the pipeline in a way that substantially affects the information included in the response plan, such as a change to the worst case discharge volume; 3. The type of oil transported, if the type affects the required response resources, such as a change from crude oil to gasoline; 4. The name of the oil spill removal organization; 5. Emergency response procedures; 6. The qualified individual; 7. A change in the NCP or an ACP that has significant impact on the equipment appropriate for response activities; and 8. Any other information relating to circumstances that may affect full implementation of the plan. 	Section 1.1
Appendix A to Part 194—Guidelines for the Preparation of Response Plans	
Information Summary	
a. For the core plan:	
1. Name and address of operator	Figure 1-2
2. For each Response Zone which contains one or more line sections that meet the criteria for	Figure 1-2

determining significant and substantial harm (? 194.103), listing and description of Response Zones, including county(s) and state(s)	
b. For each Response Zone appendix:	
1. Information summary for core plan	<u>Section 1</u>
2. QI names and telephone numbers, available on 24-hr basis	<u>Figure 1-2</u>
3. Description of Response Zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment	<u>Figure 1-2</u>
4. List of line sections contained in Response Zone, identified by milepost or survey station or other operator designation	<u>Figure 1-2</u>
5. Basis for operator's determination of significant and substantial harm	<u>Figure 1-2</u>
6. The type of oil and volume of the worst case discharge	<u>Figure 1-2</u>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
c. Certification that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or threat of such discharge	<u>Section 1.3, Appendix B</u>
Notification Procedures	
a. Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable state or local requirements	<u>Section 3</u>
b. Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority	<u>Section 3.1</u>
c. Name of persons (individuals or organizations) to be	<u>Section 3.1, Figure</u>

notified of discharge, indicating whether notification is to be performed by operating personnel or other personnel	<u>3.1-3</u>
d. Procedures for notifying Qualified Individuals	<u>Figure 3.1-1, Section 4.4, Figure 4.4-1</u>
e. Primary and secondary communication methods by which notifications can be made	<u>Section 7.1.6</u>
f. Information to be provided in the initial and each follow-up notification, including the following: <ul style="list-style-type: none"> 1. Name of pipeline 2. Time of discharge 3. Location of discharge 4. Name of oil recovered 5. Reason for discharge (e.g. material failure, excavation damage, corrosion) 6. Estimated volume of oil discharged 7. Weather conditions on scene 8. Actions taken or planned by persons on scene 	<u>Figure 3.1-2</u>
Spill Detection and On-Scene Spill Mitigation Procedures	
a. Methods of initial discharge detection	<u>Appendix C.1</u>
b. Procedures, listed in order of priority, that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline	<u>Section 2</u>
c. List of equipment that may be needed in response activities based on land and navigable waters including: <ul style="list-style-type: none"> 1. Transfer hoses and pumps 2. Portable pumps and ancillary equipment 3. Facilities available to transport and receive oil from a leaking pipeline 	<u>Section 7.1.1, Appendix B</u>
d. Identification of the availability, location, and contact phone numbers to obtain equipment for response activities on a 24-hour basis	<u>Figure 3.1-3, Figure 7.1-1, Appendix B</u>

DOT / PHMSA CROSS-REFERENCE, CONTINUED

e. Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in	<u>Figure 3.1-3, Appendix B</u>
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response activities on a 24-hour basis	
Response Activities	
a. Responsibilities of, and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the Qualified Individual or other response resources identified in the response plan	Section 2 , Section 4.4 , Appendix B
b. Qualified Individual's responsibilities and authority, including notification of the response resources identified in the response plan	Section 4.4
c. Procedures for coordinating the actions of the operator or Qualified Individual with the action of the OSC responsible for monitoring or directing those actions	Section 4.3 , Section 4.4
d. Oil spill response organizations (OSRO) available through contract or other approved means, to respond to a worst case discharge to the maximum extent practicable	Appendix B
e. For each organization identified under paragraph (d), a listing of: <ul style="list-style-type: none"> 1. Equipment and supplies available 2. Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first seven days of the response 	Appendix B
List of Contacts	
a. List of persons the Plan requires the operator to contact	Figure 3.1-1
b. Qualified individuals for the operator's areas of operation	Figure 1-2
c. Applicable insurance representatives or surveyors for the operator's areas of operation	Figure 3.1-1
d. Persons or organizations to notify for activation of response resources	Figure 3.1-1
Training Procedures	
Description of training procedures and programs of the operations	Appendix A.2
Drill Procedures	
a. Announced and unannounced drills	Appendix A.1
b. Types of drills and their frequencies; for example:	Appendix A.1

1. Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly
2. Drills involving emergency actions by assigned operating or maintenance personnel and notification of qualified individual on pipeline facilities which are normally unmanned, conducted quarterly
3. Shore-based Incident Management Team (IMT) tabletop drills conducted yearly
4. Oil spill removal organization field equipment deployment drills conducted yearly
5. A drill that exercises entire response plan for each Response Zone, would be conducted at least once every three years

DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Response Plan review and update procedures	
a. Procedures to meet ?194.121	<u>Section 1.2</u>
b. Procedures to review plan after a worst case discharge and to evaluate and record the plan?s effectiveness	<u>Section 1.2, Section 8.3, Appendix C</u>
Response zone appendices	
Each response zone appendix would provide the following information:	
a. Name and telephone number of the qualified individual	<u>Figure 1-2</u>
b. Notification procedures	<u>Section 3</u>
c. Spill detection and mitigation procedures	<u>Section 2.1, Section 7, Appendix C.1</u>
d. Name, address, and telephone number of oil spill response organization	<u>Figure 3.1-3, Appendix B</u>
e. Response activities and response resources including: <ol style="list-style-type: none"> 1. Equipment and supplies necessary to meet ? 194.115 2. Trained personnel necessary to sustain operation of the equipment and to staff the oil spill response organization and Incident Management Team for the 	<u>Figure 3.1-3, Section 7.1.1, Appendix A, Appendix B</u>

first seven days of the response	
f. Names and telephone numbers of federal, state, and local agencies which the operator expects to assume pollution response responsibilities	Figure 3.1-3
g. Worst case discharge volume	Appendix C.4
h. Method used to determine the worst case discharge volume, with calculations	Appendix C.4
i. A map that clearly shows: <ol style="list-style-type: none"> 1. Location of worst case discharge 2. Distance between each line section in the Response Zone: <ol style="list-style-type: none"> i. Each potentially affected public drinking water intake, lake, river, and stream within a radius of five miles of the line section ii. Each potentially affected environmentally sensitive area within a radius of one mile of the line section 	Figure 1-3 , Figure 1-4 , Section 6.7 , Section 6.8
j. Piping diagram and plan-profile drawing of each line section; may be kept separate from the response plan if the location is identified	Figure 1-2
k. For every oil transported by each pipeline in the response zone, emergency response data that: <ol style="list-style-type: none"> 1. Include name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods 2. Meet 29 CFR 1910.1200 or 49 CFR 172.602 	Figure C.6-1

OSHA CROSS-REFERENCE

EAP REQUIREMENTS (29 CFR 1910.38 [a] [2])	LOCATION
<ul style="list-style-type: none"> • Emergency escape procedures and emergency escape route assignments 	Section 2
<ul style="list-style-type: none"> • Procedures to be followed by employees who remain to operate critical plant operations before they evacuate 	N/A

<ul style="list-style-type: none"> Procedures to account for all employees after emergency evacuation has been completed 	<u>Section 2</u>
<ul style="list-style-type: none"> Rescue and medical duties for those employees who are to perform them 	<u>Section 2</u>
<ul style="list-style-type: none"> The preferred means of reporting fires and other emergencies 	<u>Section 2, Figure 3.1-1</u>
<ul style="list-style-type: none"> Names of regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan 	<u>Figure 3.1-3,</u>
ERP REQUIREMENTS (29 CFR 1910.120 [I] [2])	LOCATION
<ul style="list-style-type: none"> Pre-emergency planning 	<u>Appendix C</u>
<ul style="list-style-type: none"> Personnel roles, lines of authority, and communication 	<u>Section 4.3, Section 4.5, Section 7.1.6</u>
<ul style="list-style-type: none"> Emergency recognition and prevention 	<u>Section 2</u>
<ul style="list-style-type: none"> Safe distances and places of refuge 	<u>Section 2</u>
<ul style="list-style-type: none"> Site security and control 	<u>Section 5.7, Section 7.3</u>
<ul style="list-style-type: none"> Decontamination procedures which are not covered by the site safety and health plan 	<u>Section 5.5</u>
<ul style="list-style-type: none"> Emergency medical treatment and first aid 	<u>Section 2</u>
<ul style="list-style-type: none"> Emergency alerting and response procedures 	<u>Section 3</u>
<ul style="list-style-type: none"> Critique of response and follow-up 	<u>Section 8.3</u>
<ul style="list-style-type: none"> PPE and emergency equipment 	<u>Section 7.1.1, Appendix B</u>

APPENDIX E
ACRONYMS AND DEFINITIONS

Last revised: July 2011

E.1 Acronyms

E.2 Definitions

E.1 ACRONYMS

ACP	Area Contingency Plan
AFFF	Aqueous Film Forming Foam
ASTM	American Society of Testing Materials
BBL	Barrel(s)
BLM	Bureau of Land Management (USDOI)
BPD	Barrels Per Day
BPH	Barrels Per Hour
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CO ₂	Carbon Dioxide
COTP	Captain of the Port (USCG)
CRZ	Contamination Reduction Zone
CWA	Clean Water Act of 1977 (Federal)
EAP	Emergency Action Plan
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	U. S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERAP	Emergency Response Action Plan
ERP	Emergency Response Plan
ERT	Emergency Response Team
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
FRT	Facility Response Team
FWPCA	Federal Water Pollution Control Act of 1972
GIS	Geographic Information System
GPM	Gallons Per Minute
HAZMAT	Hazardous Materials
HCA	High Consequence Area
HMIS	Hazardous Material Information System

IC	Incident Commander
IMS	Incident Management System
IMT	Incident Management Team
JIC	Joint Information Center
LEL	Lower Explosive Limit

LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LNG	Liquid Natural Gas
LPG	Liquefied Petroleum Gas
MSDS	Material Safety Data Sheets
MTR	Marine Transportation Related
N/A	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIIMS	National Interagency Incident Management System
NM	Nautical Miles
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center
NRDA	National Resource Damage Assessment
NRT	National Response Team
OBA	Oxygen Breathing Apparatus
OPA 90	Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDH)
PHMSA	Pipeline and Hazardous Materials Safety Administration (DOT)
PPE	Personal Protective Equipment
PREP	(National) Preparedness for Response Exercise Program
QI	Qualified Individual
RCRA	Resource Conservation and Recovery Act of 1976
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act
SCADA	Supervisory Control and Data Acquisition (System)
SCBA	Self Contained Breathing Apparatus
SDWA	Safe Drinking Water Act of 1986

SERC	State Emergency Response Commission
SETS	Safety Environment and Training Services
SI	Surface Impoundment
SIC	Standard Industrial Classification (Code)
SOSC	State On-Scene Coordinator
SPCC	Spill Prevention, Control, and Countermeasures (Plan)
SSC	Scientific Support Coordinator (NOAA)
UCS	Unified Command System
UEL	Upper Explosive Limit

USACOE	U. S. Army Corps of Engineers
USCG	U. S. Coast Guard
USDOD	U. S. Department of Defense
USDL	U. S. Department of Labor
USDOE	U. S. Department of Energy
USDOI	U. S. Department of the Interior
USDOJ	U. S. Department of Justice
USDOT	U. S. Department of Transportation
USFWS	U. S. Fish and Wildlife Service (USDOI)
USGS	U. S. Geological Survey (USDOI)

E.2 DEFINITIONS

Adverse Weather

The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather-related visibility, and currents with the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Aqueous Film Forming Foam

A fluoro-carbon surfactant that acts as an effective vapor securing agent due to its effect on the surface tension of the water. Its physical properties enable it to float and spread across surfaces of a hydrocarbon fuel with more density than protein foam.

Average Most Probable Discharge (**USCG**)

A discharge of the lesser of 50 barrels (2100 gallons) or one percent of the volume of the worst case discharge.

Barrel

Measure of space occupied by 42 U. S. gallons at 60 degrees Fahrenheit.

Bleve

A boiling liquid-expanding vapor explosion; failure of a liquefied flammable gas container caused by fire exposure. Pronounced "blevey."

Boilover

Occurs when the heat from a fire in a tank travels down to the bottom of the tank causing water that is already there to boil and push part of the tank's contents over the side.

Carbon Dioxide

A heavy, colorless, odorless, asphyxiating gas, that does not normally support combustion. It is one and one-half times heavier than air and when directed at the base of a fire its action is to dilute the fuel vapors to a lean mixture to extinguish the fire.

Class A Fire

A fire involving common combustible materials which can be extinguished by the use of water or water solutions. Materials in this category include wood and wood-based materials, cloth, paper, rubber and certain plastics.

Class B Fire

A fire involving flammable or combustible liquids, flammable gases, greases and similar products. Extinguishment is accomplished by cutting off the supply of oxygen to the fire or by preventing flammable vapors from being given off.

Class C Fire

A fire involving energized electrical equipment, conductors or appliances. Nonconducting extinguishing agents must be used for the protection of firefighters.

Class D Fire

A fire involving combustible metals, for example, sodium, potassium, magnesium, titanium and aluminum. Extinguishment is accomplished through the use of heat-absorbing extinguishing agents such as certain dry powders that do not react with the burning metals.

Cold (Support) Zone

An area free of contaminants so that Personal Protection Equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

Command Post

A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

Communication Equipment

Equipment that will be utilized during response operations to maintain communication between employees, contractors, federal/state/local agencies.

Containment Boom

A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

Contamination Reduction Zone

Same as the warm zone, a buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

Contingency Plan

A document used by: (1) federal, state, and local agencies to guide planning and response procedures regarding spill of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

Contract or Other Approved Means

Includes:

- A written contractual agreement with a response contractor. The agreement should identify and ensure the availability of the specified personnel and equipment described under U.S.C.G. Regulations within stipulated response times in the specified geographic areas
- Certification by the facility owner or operator that the specified personnel and equipment described under USCG Regulations are owned, operated, or under the direct control of the facility owner or operator, and are available within stipulated times in the specified geographic areas
- Active membership in a local or regional oil spill removal organization that has identified specified personnel and equipment described under USCG Regulations that are available to respond to a discharge within stipulated times in the specified geographic areas
- A document which:
 - Identifies the personnel, equipment, services, capable of being provided by the response contractor within stipulated response times in specified geographic areas
 - Sets out the parties' acknowledgment that the response contractor intends to commit the resources in the event of a response
 - Permits the Coast Guard to verify the availability of the response resources identified through tests, inspections, drills
 - Is incorporated by reference in the Response Plan

- For a facility that could reasonably be expected to cause substantial harm to the environment, with the consent of the response contractor or oil spill removal organization, the identification of a response contractor or oil spill removal organization with specified equipment and personnel which are available within stipulated response times in specific geographic areas.

Demand Breathing Apparatus

A type of self-contained breathing apparatus that provides air or oxygen from a supply

carried by the user.

Dispersants

Those chemical agents that emulsify, disperse, or solublize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion Boom

A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

Environmentally Sensitive Areas

Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

Exclusion Zone

Same as hot zone, the area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

Explosive Range

Flammable range; the range of the mixture of air and flammable gas or flammable vapor of liquids that must be present in the proper proportions for the mixture to be ignited. The range has upper and lower limits; any mixture above the upper explosive limit or below the lower explosive limit will not burn.

Facility

Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter the coastal waters.

Federal Fund

The oil spill liability trust fund established under OPA.

First Responders, First Response Agency

A public health or safety agency (i.e., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

Flashover

The ignition of combustibles in an area heated by convection, radiation, or a combination of the two. The action may be a sudden ignition in a particular location followed by rapid spread or a "flash" of the entire area.

Flash Point

The temperature at which a liquid fuel gives off sufficient vapor to form an ignitable mixture near its surface.

Foam

A blanket of bubbles that extinguishes fire mainly by smothering. The blanket prevents flammable vapors from leaving the surface of the fire and prevents oxygen from reaching the fuel. The water in the foam also has a cooling effect.

Hazardous Material

Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Hazardous Substance

Any substance designed as such by the Administrator of EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act.

Hazardous Waste

Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resources Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.

Higher Volume Port Area

Ports of:

- Boston, MA
- New York, NY
- Delaware Bay and River to Philadelphia, PA
- St. Croix, VI
- Pascagoula, MS
- Mississippi River from Southwest Pass, LA to Baton Rouge, LA
- Louisiana Offshore Oil Port (LOOP), LA
- Lake Charles, LA
- Sabine-Nachez River, TX
- Galveston Bay and Houston Ship Channel, TX
- Corpus Christi, TX
- Los Angeles/Long Beach Harbor, CA
- San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay to Antioch, CA
- Straits of Juan de Fuca and Puget Sound, WA
- Prince William Sound, AK

Hot (Exclusion) Zone

The area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

Hypothermia

A dangerously high fever that can damage nerve centers. This condition can result from exposure to excessive heat over an extended period of time.

Ignition Temperature

The lowest temperature at which a fuel will burn without continued application of an ignition source.

Incident Commander (IC)

The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Incident Command System

A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

Incident Management Team

The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Interim Storage Site

A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

Lead Agency

The government agency that assumes the lead for directing the spill response.

Lead Federal Agency

The agency which coordinates the federal response to incidents on navigable waters. The lead Federal agencies are:

- **U. S. Coast Guard (USCG):** Oil and chemically hazardous materials incidents on navigable waters
- **Environmental Protection Agency (EPA):** Oil and chemically hazardous materials incidents on most inland waters and in the inland zone

Lead State Agency

The agency which coordinates state support to Federal and/or Local governments or assumes the lead in the absence of a Federal spill response.

Lower Flammable Limit

Minimum flammable concentration of a particular gas in the air.

Marine Transportation-Related Facility (MTR Facility)

An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

Maximum Extent Practicable

The planning values derived from the planning criteria used to evaluate the response resources described in the response plan to provide the on-water recovery capability and the shoreline protection and clean-up capability to conduct response activities for a worst case discharge from a facility in adverse weather.

Maximum Most Probable Discharge (USCG)

A discharge of the lesser of 2,500 barrels or ten percent of the volume of a worst case discharge.

Medium Discharge (EPA)

Same as maximum most probable discharge.

National Contingency Plan

The plan prepared under the Federal Water Pollution Control Act (33 United States Code '1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code '9601 et seq), as revised from time to time.

Nearshore Area

The area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation (COLREG) lines) defined in '80.740 - 80.850 of Title 33 of the CFR.

Non-Persistent or Group I Oil

A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

- At least 50% of which by volume, distill at a temperature of 340EC (645EF)
- At least 95% of which volume, distill at a temperature of 370EC (700EF)

Non-Petroleum Oil

Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Offshore Area

The area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico it is the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in '80-740 - 80.850 of Title 33 of the CFR extending seaward to 50 nautical miles.

Oil or Oils

Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by P.L. 99-499.

Oil Spill Removal Organization (OSRO)

An entity that provides oil spill response resources, and includes any for profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Operating Area

The rivers and canals, inland, nearshore, Great Lakes, or offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating Environment

Rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

Overhaul

A procedure following a fire whereby the area is examined for hidden fire and fire extension and the fire area is cleaned up.

Owner or Operator

Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil

A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

- Group II - specific gravity less than .85
- Group III - specific gravity between .85 and less than .95
- Group IV - specific gravity .95 to and including 1.0
- Group V - specific gravity greater than 1.0

Primary Response Contractor(s)

An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual(s)

An English-speaking representative(s) of the facility identified in the plan, located in the United States, available on a 24-hour basis, familiar with implementation of the facility response plan, and trained in his or her responsibilities under the plan. This person must have full written authority to implement the facility's response plan. This includes:

- Activating and engaging in contracting with identified oil spill removal organization(s)
- Acting as a liaison with the predesignated of Federal On-Scene Coordinator (FOCS)
- Obligating, either directly or through prearranged contracts, funds required to carry out all necessary or directed response activities

Regional Response Team

The Federal Response Organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOCS in the event of a major or substantial spill.

Reid Vapor Pressure Method

Method used by the American Society of Testing Materials to test vapor pressure. It is a measure of the volatility, or tendency to vaporize, of a liquid.

Responsible Party

Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

Rivers and Canals

A body of water confined within the inland area that has a projected depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

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.

Sloper

An event that occurs when water is introduced into a tank of very hot liquid, causing the liquid to froth and spatter.

Small Discharge (EPA)

Same as average most probable discharge.

Sorbents

Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned

areas.

Spontaneous Ignition

A fire that occurs without a flame, spark, hot surface, or other outside source of ignition.

Staging Areas

Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission (SERC)

A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Static Electricity

Charges of electricity accumulated on opposing and usually moving surfaces having negative and positive charges, respectively. A hazard exists where the static potential is sufficient to discharge a spark in the presence of flammable vapors or combustible dusts.

Support Zone

Same as cold zone, an area free of contaminants so that personal protection equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

Tornado Warning

A tornado has been sighted.

Tornado Watch

Conditions are favorable for tornados to form.

Unified Command

The method by which local, state, and federal agencies will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident
- Determine their overall objectives for management of an incident
- Select a strategy to achieve agreed upon objectives
- Deploy resources to achieve agreed-upon objectives

Warm (Contamination Reduction) Zone

A buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

Waste

Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Wildlife Rescue

Efforts made in conjunction with federal and state agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

APPENDIX F
ADDITIONAL INFORMATION

Last Revised: July 2011

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