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SPILL RESPONSE PLAN

Developed by:

TECHNICAL RESPONSE PLANNING CORPORATION ™

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FIGURE 1.1 – Record of Changes

This plan will be reviewed and updated at least annually or whenever necessary to reflect changes in procedures, response strategies, phone numbers, and regulatory mandates. These changes will be noted in the Record of Changes form. Plan review and modifications will be initiated and coordinated by the Environmental Coordinator.

CHANGE NUMBER	DATE OF CHANGE	NAME OF PERSON AUTHORIZING THE CHANGE	ELEMENTS OF THE PLAN THAT WERE CHANGED	DESCRIPTION OF CHANGE
1	10/02	Jim Clark	Changed portions of: • Table of Contents • Sections 1, 2, 3, 4, 6, and 7 • Appendices A, B, C, D, E, F, and G	
2	6/04	Jim Clark	Added Cherry Point Crude Pipe Line Changed portions of: • Table of Contents • Sections 1, 2, 3, 4, 5, and 7 • Appendices B, C, and E	
3	12/05	Shan Mathews	Changed portions of: • Sections 1, 2, 3, 4, 6, and 7 • Appendices B, C and D	Plan was updated to reflect changes in Olympic staff as well as to capture informal comments provided by Rebecca Post, WDOE Plan Coordinator
4	6/07	Shan Mathews	Added Preamble Changed portions of: • Table of Contents • Sections 1, 2, 3, 4, 7 • Appendices E and G	Plan was revised to reflect changes in Olympic staff as well as account for new regulatory requirements of WAC 173-182

FIGURE 1.1 – Record of Changes (continued)

5	5/09	Shan Mathews	Removed Preamble Changed portions of: • Table of Contents • Sections 1, 2, 3, 4, 5, 6, 7 • Appendices A, B, E, F, G	Plan was revised to reflect changes in Olympic staff and response equipment as well as to address comments provided by Dan McDonald, WDOE Plan Coordinator on 9/8/08
6	1/10	Shan Mathews	Changed portions of: • Sections 1, 3, 4 • Appendices B, E	Plan was revised to reflect changes in Olympic staff and to address comments provided by Kelli Gustaf, WDOE Plan Coordinator on 12/23/09
7	11/10	Shan Mathews	Changed portions of: • Sections 3, 4	Plan was revised to reflect changes in Olympic staff
8	3/11	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 3 • Appendices A, E, G	Plan was revised to remove all references to RSPA
9	4/11	Shan Mathews	Changed portions of Section 1	Added City of Kent to the distribution list
10	9/11	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 2, 3, and 4 • Appendix C	Plan was revised to reflect changes in Reports from Outside Sources, Spill Report Form, Olympic staff, Olympic Incident Management Team, Olympic System Map, Block Valve and Facility Directions, and the addition of Notification Procedures for Report from Outside Sources.
11	11/11	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 3, and 7 • Appendices E and G	Updated Figures 1.2, 3.5, and E.1 Corrected typos and formatting in 7.1 and G.3 Removed Figures 3.7 and 3.8

FIGURE 1.1 – Record of Changes (continued)

12	12/12	Kelli Gustaf	Changed portions of: • Table of Contents • Section 1, 2, 3, 5 and 7 • Field Document	Plan was revised to reflect changes in Olympic staff. Updated Figure 1.2 and the Binding Agreement (Section 1.5). Updated notification forms in Section 3 and in the Field Document. Updated Figure 2.1 with new BP terminology. Updated Section 5.5, 5.6, and 5.8 to coordinate with the NWACP. Added nine Olympic Pipe Line Company Spill Response Trailers into Section 7.

FIGURE 1.2 – Distribution List

Organization	Location/Individual	Spill Plan	GRP's		
			North	Central	South
BP/Olympic Pipe Line Co.	District Operations Manager	X	X	X	X
BP/Olympic Pipe Line Co.	North Area Team Leader	X	X	X	X
BP/Olympic Pipe Line Co.	Central Area Team Leader	X	X	X	X
BP/Olympic Pipe Line Co.	South Area Team Leader	X	X	X	X
BP/Olympic Pipe Line Co.	Environmental Coordinator	X	X	X	X
BP/Olympic Pipe Line Co.	Renton Control Center	X	X	X	X
BP/Olympic Pipe Line Co.	Renton Station Office	X	X	X	X
BP/Olympic Pipe Line Co.	Renton Admin Office	X	X	X	X
BP/Olympic Pipe Line Co.	Allen Pump Station	X	X	X	X
BP/Olympic Pipe Line Co.	Anacortes Pump Station	X	X		
BP/Olympic Pipe Line Co.	Ferndale Pump Station	X	X		
BP/Olympic Pipe Line Co.	Woodinville Pump Station	X	X	X	
BP/Olympic Pipe Line Co.	Seattle Delivery Facility	X		X	
BP/Olympic Pipe Line Co.	Tacoma Pump Station	X		X	X
BP/Olympic Pipe Line Co.	Tacoma Delivery Facility	X		X	
BP/Olympic Pipe Line Co.	Olympia Pump Station	X			X
BP/Olympic Pipe Line Co.	Castle Rock Pump Station	X	X	X	X
BP/Olympic Pipe Line Co.	Vancouver Delivery Facility	X			X
BP/Olympic Pipe Line Co.	Portland Delivery Facility	X			X
BP Pipelines NA	Tulsa Control Center	X			
BP Pipelines NA	USPL DOT Team	X	X	X	X
BP Pipelines NA	Cherry Point Meter Station	X			
US DOT/PHMSA	John Hess, Emergency Support and Security	X	X	X	X
WA Dept of Ecology	S. Zimmerman (1 electronic)	2	X	X	X
Oregon DEQ	Scott Smith (1 electronic)	2			X
WA Utilities and Transportation Commission	Dave Lykken, Director	X	X	X	X
WA Dept. of Fish and Wildlife	Dan Doty, Oil Spill Manager		X	X	X

FIGURE 1.2 – Distribution List (continued)

Organization	Location/Individual	Spill Plan	GRP's		
			North	Central	South
Washington State EMD	Response Manager	X			
US Coast Guard MSU Portland	Environmental Response	X			X
US Coast Guard Sector Puget Sound	Environmental Response	X	X	X	
Whatcom Unified Emergency Management	Kent Catlin, Deputy Director	X	X		
Skagit County DEM	Mark Watkinson, Director	X	X		
Snohomish County DEM	John E. Pennington, Director	X	X		
King County DEM	Walt Hubbard, Director	X		X	
Pierce County DEM	Jody Woodcock	X		X	
Thurston County DEM	Karen Axtmann	X		X	X
Lewis County DEM	Steve Mansfield	X			X
Cowlitz County DEM	Ernie Schnabler, Director	X			X
Clark County Emergency Services	Anna Pendergrass	X			X
Multnomah County Emergency Management	Joe Partridge	X			X
MSRC	Chris Stadiem	X	X	X	X
NRC Environmental	Bart Dodson	X	X	X	X
Cowlitz Clean Sweep	John Hanson	X		X	X
Clean Rivers Cooperative	Ernie Queseda	X			X
City of Kent	Brian Felczak	X		X	
Enbridge	Femke Pennings (electronic)	X			
Olympic Spill Trailer	Bayview – Dennis Johnston	X	X	X	X
Olympic Spill Trailer	Milton – Ken Carlton	X	X	X	X
Olympic Spill Trailer	Castle Rock – Jeff Berry	X	X	X	X

FIGURE 1.3A – Plan Information Summary – Olympic Pipeline

Owner:	Olympic Pipe Line Company 2319 Lind Avenue SW Renton, WA 98055 Phone: (425) 235-7736
Operator:	BP Pipelines North America 2201 Lind Ave. Suite 270 Renton, WA 98055 Phone: (425) 235-7736 Fax: (425) 981-2525
Product Transported:	• Various grades of unleaded gasoline • Aviation turbine fuel (kerosene) • Diesel fuel • Refer to **APPENDIX E.6** for product characteristics.
Qualified Individuals:	Refer to **FIGURE 3.4** for a complete list of Qualified Individuals. For further information on Qualified Individual's training and qualifications, refer to **SECTION 4.6** and **APPENDIX A** in this Plan.
Pipeline Description:	Olympic Pipe Line Operating System is comprised of over 400 miles of petroleum products pipelines, extending from refineries in Northwest Washington and continuing through the state (paralleling Puget Sound and the Interstate 5 Corridor), terminating near Portland, Oregon.
Response Zone Consists of the Following Counties:	Clark, Cowlitz, King, Lewis, Pierce, Skagit, Snohomish, Thurston, Whatcom in Washington, and Multnomah in Oregon
Delivery Facilities:	• Bayview • Renton • Seattle • Sea-Tac International Airport • Tacoma • Spanaway (Tacoma Station) • Vancouver • Linnton (OR) • Portland (OR)
Pump Stations:	• Cherry Point • Ferndale • Anacortes (Shell and Tesoro) • Allen • Woodinville • Renton • Tacoma • Rainier (Olympia Station) • Castle Rock
Refineries:	• BP Cherry Point Refinery • Phillips 66 Ferndale Refinery • Tesoro Anacortes Refinery • Shell Puget Sound Refinery
Line Segments:	• Refer to **FIGURE C.1** in **APPENDIX C**.
Statement of Significant and Substantial Harm:	The response zone in this system contains pipeline segments greater than 6 5/8 inches in outside diameter and/or longer than ten miles. Sections of the pipeline cross major waterways, have experienced a release of greater than 1,000 barrels, are within five miles of public drinking water intakes, or are within one mile of environmentally sensitive areas. Therefore, in accordance with 49 CFR 194.103(b), the entire response zone described in this Plan will be treated as if expected to cause significant and substantial harm. Refer to **FIGURES C.1** and **C.2** in **APPENDIX C** for delivery line segments.
Date Plan Prepared:	November 2000

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.

FIGURE 1.3B – Plan Information Summary - Cherry Point Crude Line

Owner:	BP West Coast Products Co. 4519 Grandview Road Blaine, WA 98230
Operator:	BP Pipelines North America 2201 Lind Ave. Suite 270 Renton, WA 98055 Phone: (425) 235-7736 Fax: (425) 981-2525
Product Transported:	• Crude oil • Refer to **APPENDIX E.6** for product characteristics.
Qualified Individuals:	Refer to **FIGURE 3.4** for a complete list of Qualified Individuals. For further information on Qualified Individual's training and qualifications, refer to **SECTION 4.6** and **APPENDIX A** in this Plan.
Pipeline Description:	The pipeline is approximately 5.3 miles long and designed for bi-directional flow. The pipeline is used primarily to receive resid shipments from ConocoPhillips, as well as to receive crude shipments from Canada via the Terasen pipeline. The pipeline can also be used to ship crude from BP Cherry Point Refinery.
Response Zone Consists of the Following Counties:	Whatcom County in Washington
Delivery Facilities:	• None
Pump Stations:	• None
Refineries:	• BP Cherry Point Refinery • Phillips 66 Ferndale Refinery
Line Segments:	• Refer to **APPENDIX D.2**.
Statement of Significant and Substantial Harm:	The response zone in this system contains pipeline segments greater than 6 5/8 inches in outside diameter and/or greater than ten miles. Sections of the pipeline cross major waterways, have experienced a release of greater than 1,000 barrels, are within five miles of public drinking water intakes, or are within one mile of environmentally sensitive areas. Therefore, in accordance with 49 CFR 194.103(b), the entire response zone described in this Plan will be treated as if expected to cause significant and substantial harm. Refer to **FIGURES C.1** and **C.2** in **APPENDIX C** for delivery line segments.
Date Plan Prepared:	June 2004

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.

1.1 PURPOSE/SCOPE OF PLAN

This Spill Response Plan (Plan) provides guidelines to quickly, safely and effectively respond to a spill from the Olympic Pipeline, the Cherry Point Crude Line, and associated facilities. Unless, superceded by a separate section within **APPENDIX D** for the Cherry Point Crude Line, the materials in the plan applies to both systems. The pipelines and associated facilities are operated by BP Pipelines North America herein referred to as "Company".

For more information on this plan, contact your supervisor, HSSE Manager or Environmental Coordinator.

This Plan is meant to supplement responder's training and experience during an actual response. Since each response is different, this Plan may not always contain all the information needed to manage a spill. This Plan is designed 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) (40 CFR 300), and the Northwest Area Contingency Plan (NWACP). Specifically, this Plan is intended to satisfy the requirements of:

- Research and Special Programs Administration, U.S. Department of Transportation (49 CFR 194)
- Washington Administrative Code (WAC) 173-182
- Oregon Administrative Rule (OAR) 340-047

1.2 PLAN UPDATING PROCEDURES

The Environmental Coordinator is responsible for all reviews, updates and distribution of the Plan.

- The Plan will be reviewed annually and following each incident or exercise, if necessary.
- The Plan shall be reviewed, modified as necessary and submitted to Oregon Department of Environmental Quality (ODEQ), Washington Department Of Ecology (WDOE), and Pipeline and Hazardous Materials Safety Administration (PHMSA) for approval every five years following initial approval
- Submit changes to ODEQ, WDOE and PHMSA within 30 days of review
- WDOE and ODEQ shall be notified in writing within 24 hours of any changes in the availability of spill response personnel and equipment

Changes in operating conditions that require significant changes in the Plan include:

- New pipeline construction or purchase
- Change in Worst Case Discharge (WCD) volume
- Change in commodities transported
- Change in OSRO's
- Change in Qualified Individuals
- Changes in the NCP and/or NWACP that impact appropriateness of response equipment or strategies
- Change in response procedures
- Change in ownership
- Other changes that materially affect implementation of the plan

Plan revisions or amendments will be numbered sequentially and distributed to all plan holders on the Distribution List (**FIGURE 1.2**). The change number, date of change and change numbers shall be entered in the Record of Changes (**FIGURE 1.1**) by the plan holder.

1.3 PLAN DISTRIBUTION

One copy of the Spill Response Plan shall be maintained in a central location, accessible to the Incident Commander and/or designated members of the Incident Management Team. One copy of the Plan shall be placed at the front desk of the Olympic Pipe Line Company Renton Station office building (designated as the central command post). Copies of the Plan shall be maintained at the pipeline facilities listed in **FIGURE 1.2**.

A field document, outlining initial notification procedures and immediate response actions in the event of a product spill, shall be provided to all Company employees. The field document contains area-specific spill reporting requirements, notification numbers, spill detection procedures, and immediate spill response actions. Olympic Team Leaders and Field Specialists will keep a copy of the Field Document in their company vehicle. Copies will also be maintained at the Olympic facilities listed in **TABLE 1.2**.

The Environmental Coordinator is responsible for distributing the Plan to authorized Plan Holders. If the individual holding this copy of the Plan is reassigned, this copy shall be transferred to that person's replacement. The Environmental Coordinator shall be notified upon future reassignments of the Plans.

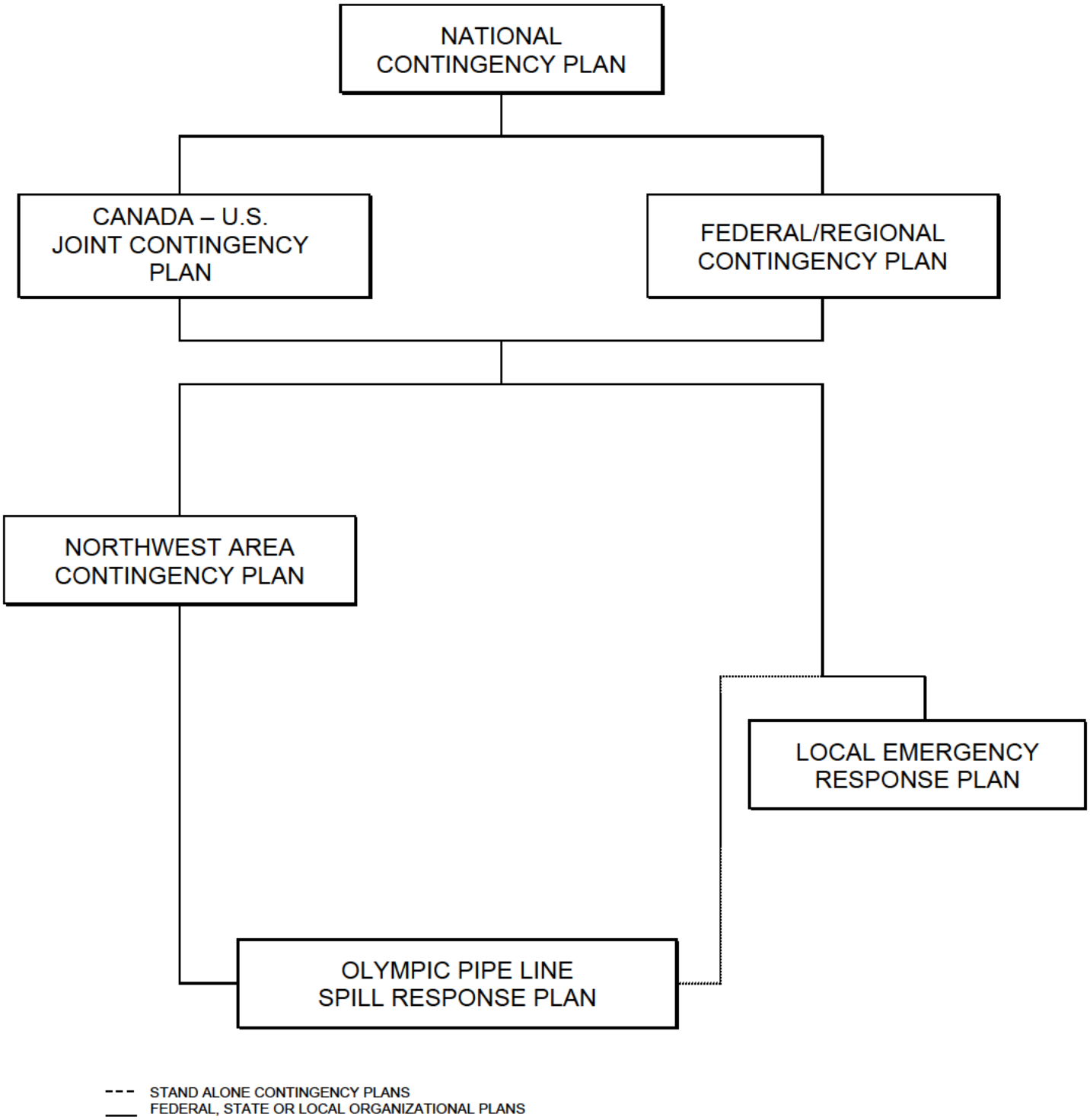
(b) (7)(F)

[redacted]

1.4 INTERFACE WITH OTHER PLANS

This Plan interfaces with other federal, state, and local plans as outlined in **FIGURE 1.5**.

FIGURE 1.5 – Interface with Other Plans



1.5 CERTIFICATION OF ADEQUATE RESOURCES

Washington State Department of Ecology
Spill Prevention, Preparedness and Response Program
P.O. Box 47600, Olympia, WA 98504-7600
For information, please contact SPPR Program at 360-407-7455.

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

WAC 173-182-220. Binding Agreement

Each plan shall contain a written statement binding the plan holder to its use. The binding agreement shall be signed by the owner or operator, or a designee with authority to bind the owner and operator of the facility or vessel covered by the plan. The agreement is submitted with the plan.

Submitting Party Information

Company Name: Olympic Pipe Line Company	
Contact Name: Edward Cimaroli	
Address: 2201 Lind Ave. SW, Suite 270; Renton, WA 98057	
Phone Number: (425) 277-5213	**Fax Number:** (425) 981-2523
Email: Edward.Cimaroli@bp.com	**Website:** www.bpoilpelines.com

Binding Agreement

I certify that I reviewed and am familiar with the information submitted in this Plan. I verify acceptance of the plan and commit to (a) a safe and immediate response to spills in Washington; (b) having an incident commander in the state within six hours after notification of a spill; (c) the implementation and use of the plan during a spill, and to the training of personnel to implement the plan; and (d) the authority and capability to make the necessary and appropriate expenditures in order to implement plan provisions.

Authorized Signature

Date 1/7/2013

EDWARD F. CIMAROLI
Print Name

VICE PRESIDENT
Title

FORM ECY 070-217 **July 2008** Printed on recycle paper

If you need this publication in an alternate format, please call the Spills Program at 360-407-7455. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

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INITIAL RESPONSE ACTIONS

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2.1 PIPELINE SYSTEM OVERVIEW

Olympic operates a petroleum liquids pipeline that originates at the Cherry Point refinery in Whatcom County and ends at the Portland Delivery Facility in Portland Oregon. The pipeline carries exclusively group I, group II and group III refined petroleum products (i.e. gasoline, diesel and jet motor fuels). An exception is the Cherry Point crude line which is a short segment of crude oil delivery pipeline described in **Appendix D**.

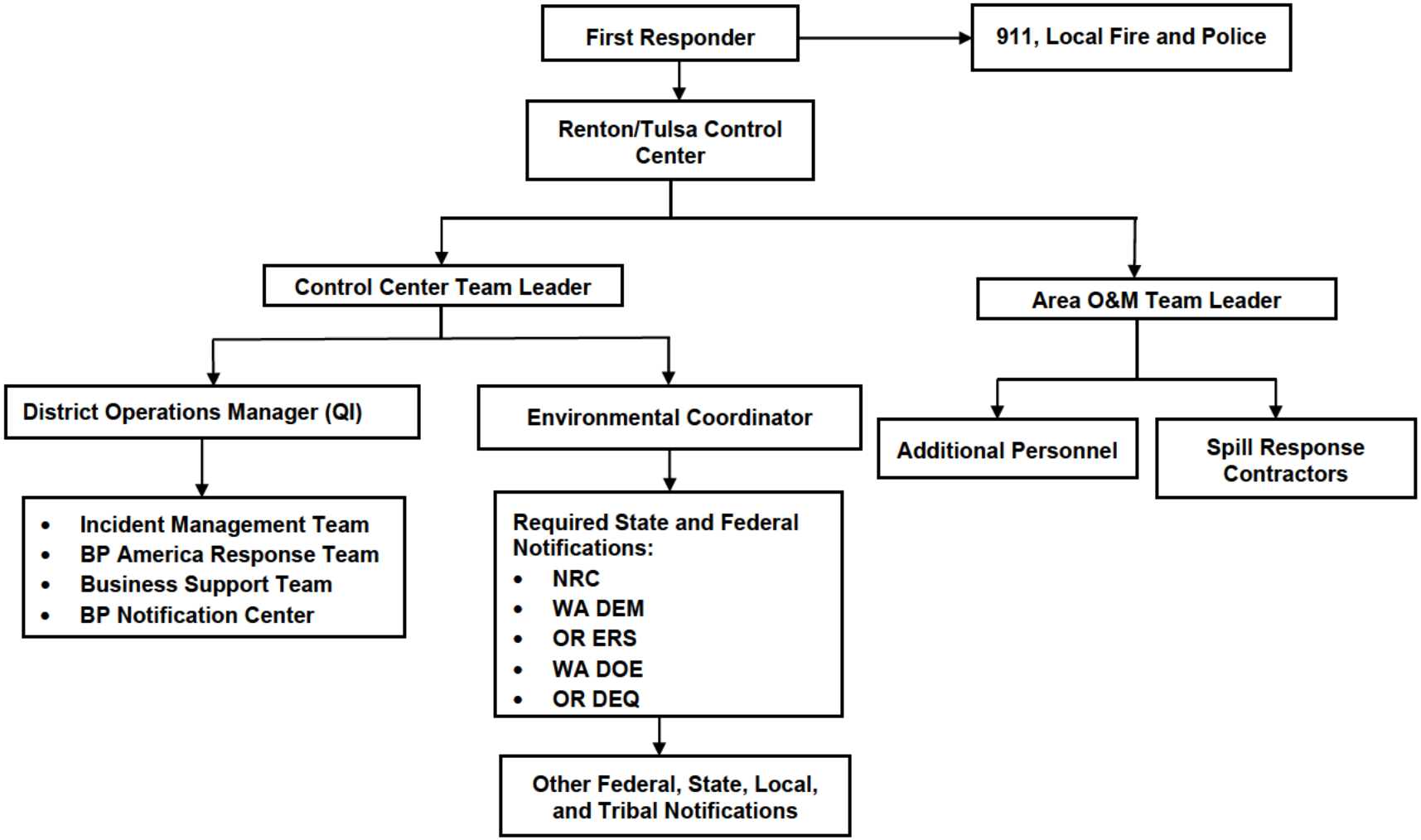
Pipeline facilities include block valve sites, booster pump stations, mainline pump stations, junctions, terminals and delivery facilities. The location and description of the pipeline facilities can be found in **Appendix C**. The Olympic Geographic Response Plans sensitive receptors information in **Section 6** and Olympics layers on electronic mapping systems can be used to gather topographic details of Olympic's Right of Way.

FIGURE 2.1 – Initial Response Action and Notification Checklist

RESPONSE ACTION (Refer to FIGURE 3.3 and FIGURE 3.4 for Telephone Numbers)	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
First Person to Discover Spill		
• Ensure safety of personnel and general public.		
• Notify Renton or Tulsa (crude line) Control Center.		
• Notify local emergency responders (911 - if necessary).		
• Monitor the air for potential hazards.		
• Shut down potential ignition sources (motors, electrical pumps, electrical power, etc.). (Hazwoper trained personnel only).		
• Shut down and control the source of the spill, if safe to do so. (Hazwoper trained personnel only).		
Renton or Tulsa Control Center		
• Suspend operations of upstream pumping stations and allow downstream pumping stations to void affected line section.		
• Shut down and isolate affected line section.		
• Dispatch field personnel in affected areas.		
• Notify Control Center Team Leader.		
• Notify Area Team O&M Leader.		
• Make additional internal notifications (i.e., Engineering		

RESPONSE ACTION (Refer to FIGURE 3.3 and FIGURE 3.4 for Telephone Numbers)	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
Manager, CORE/Maintenance Team Leader, and System Engineer) as necessary.		
Control Center Team Leader		
• Notify Environmental Coordinator.		
• Notify District Operations Manager (QI).		
District Operations Manager (QI)		
• Activate Incident Management Team (IMT).		
• Activate BP America Response Team (BART) if necessary.		
• Notify BP Notification Center.		
• Activate Business Support Team (BST) if necessary.		
• Serve as Incident Commander for the response		
• Evaluate need for and, if needed, establish a Tactical Command Post (**FIGURE 7.6**)		
• Document response actions.		
Environmental Coordinator		
• Make required Federal and State notifications in accordance with **FIGURE 3.3** • Notify HSSE Manager • Notify Government and Public Affairs		
• Make additional Federal, State, Local, and Tribal notifications, as necessary.		
• Identify and assess environmental sensitivities using **VOLUME 1**, **SECTION 6**, maps Northwest Area Contingency Plan Geographic Response Plans (GRPs) and **Olympic** GRPs, as necessary.		
Area O&M Team Leader		
• Activate local and regional spill response contractors.		
• Dispatch additional personnel.		
• Initiate Spill Tracking and Surveillance Operations.		
• Dispatch additional Air Monitoring Resources		
SECONDARY RESPONSE ACTIONS (Refer to Incident Management Team Job descriptions in **FIGURE 4.5** for detailed responsibilities.)		

FIGURE 2.2 – Initial Response Flowchart



Refer to **SECTION 3** for agency and personnel phone numbers.

2.2 SPILL DETECTION AND MITIGATION PROCEDURES

Olympic Pipe Line Company personnel continuously monitor operational performance and integrity throughout pipeline operations and terminal transfers. (b) (7)(F) [redacted] (b) (7)(F) [redacted]. If abnormal operating conditions precipitate during pipeline operation, audible and visual alarms activate, and an investigation is subsequently initiated to determine the source of the abnormal condition. (b) (7)(F) [redacted] The information presented in this section is general in nature. Current and specific procedures are in Olympic Pipe Line Operations Maintenance and Emergency Response Manual.

The information provided within this section describes the types of system monitoring utilized to detect and prevent leaks; and once a leak has been confirmed, the procedures initiated to prevent further discharge of material from the pipeline prior to the arrival or assembly of the spill response team.

2.2.1 Olympic Renton Control Center Monitoring

Pipeline pressures, flow rates, and line balances are monitored at the Olympic Pipe Line Company Renton Control Center, with conditions deviating outside of normal operational standards immediately investigated. Aboveground tanks within manned and unmanned facilities are equipped with high and high-high level alarms that will signal the Olympic Pipe Line Company Renton Control Center. In the case of a high level alarm transfer operations shall be suspended, with product diverted into an alternate storage or breakout tank. In the case of a high-high alarm, the facility will automatically be locked out. All equipment control and performance variations require immediate analysis in order to determine the source of the potential problem.

Leaks may be detected via several methods. All Renton Control Center Operations Controllers should be alert to these procedures and, in all cases, utilize their best judgment upon analysis of a potential leak situation.

Listed below are several methods by which a leak may be detected:

- pressure drop/flow variation
- shortage trend evident in over/short calculations,

- significant shortage in one checking period without pressure drop,
- use of a computational pipeline model,
- recorded history of the system operating under similar conditions,
- pipeline patrol planes surveillance,
- landowner's reporting, and/or
- reports issued on emergency telephones via company personnel, third parties, and/or civil authorities.

2.2.2 Abnormal Operating Conditions and Proposed Counter Measures

Unintended Valve Closure

Whenever a valve closes against an operational pipeline, abnormally high pressure can result. The following procedures shall be undertaken via the Olympic Pipe Line Company Renton Control Center Operations Controller(s) in the event of unintended valve closure:

- Upon receipt of an alarm for high pressure (or other information indicating a potentially blocked line), the Renton Control Center Operations Controller(s) shall immediately initiate emergency shutdown procedures through suspension of operations of:
    - the nearest pumping unit(s) upstream of the high pressure condition,
    - pumping units at the originating station, and
    - all downstream pumping units.
- Subsequent to line shutdown, the Renton Control Center Operations Controller(s) shall investigate the source of the high pressure (using all available information) and subsequently determine the level and duration of the high pressure reported by the equipment.
- Notification of the Renton Control Center Operations Supervisor shall commence immediately subsequent to line shutdown.
- If conditions indicate that a loss of product from the pipeline might have occurred, the pipeline shall remain down, and appropriate employees shall be dispatched to the affected area(s). The pipeline shall be blocked in segments in an attempt to isolate the affected area(s) and minimize the potential release.
- If a release is confirmed, the Renton Control Center Operations Controller(s) shall commence defined spill response procedures.
- If the decision is made to restart the pipeline, line balance calculations shall be monitored at frequent intervals. If the line balance indicates a

- consistent loss trend, the pipeline will be shut down as soon as the trend is apparent, and appropriate investigative steps shall be subsequently undertaken. Some imbalances immediately subsequent to start-up may be the result of line pack and should be expected, but should not continue subsequent to pressure stabilization.

Unintended Shutdown

An unintended shutdown of a pumping unit or station could result from pressure changes within the pipeline or via equipment failure. The Olympic Pipe Line Company Renton Control Center Operations Controller(s) response to this occurrence shall vary depending upon the probable cause. Data, such as computer trends, protective device settings, and computer alarm limits, may provide necessary information to determine probable cause.

Within multi-station pipeline segments, other station shutdowns may be affected upon the initial shutdown. A pumping unit shutdown resulting from pressure abnormalities (such as high discharge, high case, or low suction pressures) requires immediate investigation via the Renton Control Center Operations Controller(s):

- **High discharge or case pressure** could indicate a blockage within the pipeline. If this should occur, the Renton Control Center Operations Controller(s) shall initiate shutdown of the pipeline and follow the procedures previously outlined for addressing a valve closure.
- **Low suction shutdown at intermediate pump stations** could indicate a release from the pipeline, especially if the station control valve was not controlling suction pressure just prior to shutdown. If information indicates that a release may have occurred, emergency shutdown and isolation procedures shall be followed. Spill response procedures shall be subsequently initiated.
- If a **shutdown results from equipment failure**, an alarm will be received at the Olympic Pipe Line Company Renton Control Center.
- If the alarm indicates a lockout situation, the station or pumping unit will remain shutdown until an employee inspects the affected location. Start-up of any locked-out pump shall not be attempted prior to field analysis and commencement of necessary repairs. Pumping units that remain locked out shall be isolated from the balance of the system.
- For alarms that are not indicative of a lockout condition, the Renton Control Center Operations Controller(s) shall investigate all available information to determine if the pumping unit should be restarted.

Line Pressure / Flow Changes

Sudden increases or decreases in pressure or flow can be the result of normal operational events, including:

- pumping unit changes,
- valve position changes, and
- fluid specific gravity changes.

Abnormal conditions could also cause these changes, thus indicating line blockages or pipeline releases.

An **unexplained increase or decrease in flow, in addition to a companion decrease in pressure outside of established limits**, is an indication of a potential release. Should this condition occur, the Renton Control Center Operations Controller(s) will investigate all available information. If no operational reason or instrumentation malfunction is apparent, the Renton Control Center Operations Controller(s) shall immediately initiate emergency shutdown procedures and dispatch appropriate employees to the affected area(s). If a release is confirmed, the Renton Control Center Operations Controller(s) shall implement defined spill response procedures.

An **unexplained decrease in flow, coupled with an increase in pressure outside of established limits**, is an indication of an unintended line blockage. In the event of such an occurrence, the Renton Control Center Operations Controller shall commence immediate shutdown procedures and follow requirements for addressing an unintended valve closure.

Potential Malfunctions

Potential malfunctions within the pipeline system include the failure of a pumping unit to stop or failure of a valve to open or close upon command.

- If a pumping unit fails to stop when commanded, a fail safe device will trip incoming power to the facility. The Renton Control Center Operations Controller(s) shall dispatch a field employee to investigate the problem.
- If a valve fails to open or close when commanded, the Renton Control Center Operations Controller(s) may have several options, depending upon the respective valve and the situation. The Renton Control Center Operations Controller(s) may elect to divert fluid to another location or shut down the pipeline or facility (if not already shutdown due to a facility lockout or shutdown). The Renton Control Center Operations Controller(s) shall monitor all available information and call for assistance from appropriate operational or maintenance personnel, as required.

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

2.2.4 Visual Monitoring

In addition to continuous monitoring of operating conditions via the Olympic Pipe Line Company Renton Control Center, visual inspections of the pipeline right-of-way (ROW) are conducted on a periodic basis.

Aerial visual inspection of the entire length of the pipeline, through the procurement of fixed-wing aircraft, is performed periodically (at least 26 times per year). Pipeline segments are also visually inspected via maintenance personnel during the normal course of work, and routine observations are made from surface vehicles as they drive along pipeline ROWs. Abnormal conditions are noted and responded to immediately. If abnormal conditions are noted via the Renton Control Center, field personnel are directed to the affected area(s) to visually assess the situation and prevent any risk of discharge of material.

2.2.5 Reports From Outside Sources

Signs are posted on perimeter fencing, with a 24-hour telephone number to call in the event of an emergency. The Olympic Pipe Line Company 24-hour telephone number is also printed on ROW signs at highway and water crossings and on mile post markers.

Outside sources may report conditions which indicate that a leak has occurred. When calls of this nature are received, the Renton Control Center Operations Controller(s) shall:

- gather the necessary information from the caller using the Spill Report Form located in the Field Document,
- assess SCADA and information received from the caller. If conditions warrant:
  - initiate emergency procedures,

- dispatch field personnel to the site to perform a visual observation, and
- continue monitoring all available information

If a release is confirmed, the Renton Control Center Operations Controller shall commence defined spill response procedures.

2.2.6 Natural Disasters

Facility personnel shall investigate Olympic Pipe Line Company facilities following reports of natural disasters, such as floods or earthquakes, to determine any effect that the disaster may have had on pipeline operations. For earthquake investigations, the Pipeline Geotechnical Inspection and Structural Mechanical Inspection checklists in the OM&ER Book II should be utilized.

2.2.7 Safety Devices

Safety devices are installed within the Olympic Pipe Line Company operating system in order to:

- protect pipeline facilities, and
- prevent injury to persons, property, and the environment.

(b) (7)(F)

[redacted]

Generally, these alarms shall require or result in shutdown of some portion of the pipeline system. In the event of station lockout, field employees will be sent to investigate and correct the condition. The shutdown portion of the system shall not be restarted until the designated field employee(s) notifies the Renton Control Center Operations Controller(s) that an abnormal condition does not exist and the system is safe.

2.2.8 Release Prevention Methods

The following pipeline release prevention methods have been incorporated into the engineering design of the Olympic Pipe Line Company system:

- Check and gate valves have been installed to control back flow in the event of a release.
- Pressure relieving valves have been installed within the pipeline system to avoid pressure build-up.
- Regular inspection and maintenance of facilities is conducted.
- All valves, pipes, and fittings are maintained at a working pressure suitable to the design requirements of the system.
- Cathodic protection has been installed and maintained within the operating system.
- Line markers clearly define pipeline ROW/road crossings.
- Visual inspection of pipeline ROWs has been incorporated into daily operating procedures.
- Work by third parties in proximity to pipeline systems is monitored.
- All mainlines and lateral lines are subject to periodic inspections (five (5) year frequency) via internal inspection tools (i.e. smart pigs).

The following release prevention methods have been incorporated into the engineering design and operational procedures of Olympic Pipe Line Company facilities to prevent releases from pipeline or terminal tankage:

- high level alarms on all storage tanks,
- monthly inspections of independent high/high level alarms on storage tanks,
- frequent visual inspection during field surveillance,
- secondary containment encompassing aboveground storage tanks and breakout tankage, and
- fencing encompassing terminal facilities to prevent unauthorized entry.

2.2.9 Spills to Groundwater

All spills involving a reportable quantity of a hazardous substance will be immediately reported following the notification process detailed in **Section 3**. In the event that a release is known or suspected of impacting soil and/or groundwater notification will be made to the Washington Department of

Ecology Toxics Cleanup Program within 90 days in accordance with the Model Toxics Cleanup Act (WAC 173-340). As soon as practicable a groundwater spill assessment will be performed. The goals of the assessment will be to determine the nature and extent of the impact, the gradient and flow direction of groundwater in the vicinity of the release identify down-gradient sensitive receptors that may require protection, and identify potential preferential pathways that may be in proximity to the release location. The following paragraphs describe the general methods to fulfill the goals of the groundwater spill assessment.

- Groundwater assessment will be performed using existing wells if they are in the vicinity of the release and with additional grab sampling via direct-push or other intrusive techniques if the impact is known or suspected of extending beyond the existing monitoring well network.

- If existing wells are not present, then assessment will be performed using grab samples collected via direct-push drill rig or other intrusive methods. Wells will be installed as appropriate to supplement data from grab samples and to collect data to evaluate groundwater flow direction and gradient. Wells will be installed by a well driller licensed in Washington State and installed according to Washington State Department of (Ecology) regulations.

Samples selected for chemical analysis will be submitted to an analytical laboratory licensed by Washington Department of Ecology (WDOE). Chemical analysis methods will include methods approved by WDOE or the United States Environmental Protection Agency (USEPA)

- A sensitive receptor survey will be performed to evaluate the location of municipal water supply wells, wetlands, surface water bodies, and/or other sensitive receptors that may be adversely impacted by the release. Sensitive receptor surveys may include, but not necessarily be limited to: reviewing appropriate maps, reviewing WDOE well records, and visual reconnaissance.

- Where groundwater discharges or is suspected to discharge to surface water, visual inspection of surface water and/or surface water sampling and analysis will be performed to evaluate the groundwater to surface water pathway.

- If underground utilities, pipelines or other buried infrastructure are located in proximity to the spill, their locations will be confirmed and their potential to act as preferential pathways will be evaluated.

Olympic maintains a contract with Antea Group (Antea) for the management of spill response involving releases to groundwater. Antea is also Olympic's

contractor for on going soil and groundwater remediation projects. Contact information for Antea can be found in **FIGURE 3.5**.

2.3 SPILL SURVEILLANCE GUIDELINES

- Surveillance of an oil spill should begin within one (1) hour or as soon as possible following discovery to enable response personnel to assess spill size, movement, and potential impact locations.

- 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.

- Use surface vessels to confirm the presence of any suspected oil slicks, IF SAFE TO DO SO. If possible, direct the vessels from the aircraft and photograph the vessels from the air to show their position and size relative to the slick.

- Updated reporting is required if the quantity, nature and/or area of impact of the spill changes from what was initially reported.

- Dispatch observers to downstream river or stream crossings to determine maximum reach of the spill.

- Adequate observation of oil on the water surface from a boat, dock or shoreline is difficult particularly in a fast moving streams or rivers where mixing is likely to occur.

- Spill surveillance is best accomplished using helicopters or small planes. Helicopters are preferred due to their superior visibility and maneuverability.

- Low visibility and night time surveillance can be improved by utilizing infrared camera equipped aircraft. The US Coast Guard and some county agencies have IR equipped helicopters that may be available to assist in spill tracking. These assets will be requested in situations when it is safe to fly and the aircraft and a crew trained in spill tracking are available.

- High wing fixed-wing planes provide better visibility than low-wing types.

- Document observations 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, and 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.

- Boats may be used to patrol the area and document the location and movements of the spill during periods of reduced visibility (dense fog or low cloud cover). However, this method may not be safe if the spill involves a highly flammable product.

- Oil spill tracking buoys are a tool that has been studied for open water spill tracking in low visibility conditions. Deployment of tracking buoys will be facilitated through Olympic's response contract with MSRC. The performance of the buoys has not been evaluated in inland water situations which are a common scenario of a spill from the pipeline. If a tracking buoy is developed for river waters its use will be incorporated into this plan.

- Surveillance is required during spill response operations to gauge effectiveness of response operations, assist in locating skimmers and continually assess size, movement, and impact of spill.

- An Oil Spill Surveillance Checklist is included in **FIGURE 2.3**.

2.3.1 Aerial Surveillance Resources

Olympic maintains contracts with four aviation companies that assure the availability of a variety of aircraft and pilots for spill surveillance operations. Olympic's contractors provide access to both fixed and rotary wing aircraft that can be at the scene of the release within 6 hours of notification. Additional assets will be brought in as needed to support spill recovery operations for three 10-hour periods during the first 72-hours of the response. The contract process allows Olympic the opportunity to pre-approve the contractor resources in accordance with BP Aviation standards. The contact information for each of the aviation companies can be found in **FIGURE 3.5**.

FIGURE 2.3 – Oil Surveillance Checklist

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

General Information

___ Date
___ Time
___ Case name
___ Observer's name
___ Observers' affiliations
___ Location of oil's source (if known)
___ Tidal or river stage (flood, ebb, slack, low water)
___ On-scene weather (wind, sea state, visibility)
___ Platform (helicopter, fixed-wing aircraft, boat)
___ Flight path/trackline
___ Altitude where observation taken
___ Areas not observed (e.g. foggy locations, restricted air spaces, shallow water areas)

Oil Observations

___ Slick Location(s)
___ Slick Dimensions
___ Orientation of Slick(s)
___ Distribution of Oil (e.g. windrows, streamers, pancakes, or patches)
___ Color and Appearance (e.g. rainbow, dull or silver sheen, black or brown in color, mousse)
___ Percent Coverage
___ Is Oil Recoverable (Y/N)? (ex. black oil, mousse, and heavy dull or dark colored sheens)

Considerations

1. During surveillance flights, travel beyond known impacted areas to check for additional oil spill sites.
2. Include the name and phone number of the person making the observations.
3. Clearly describe the locations where oil is observed, as well as the areas where no oil has been seen.

Other Observations

Response Operations

___ Skimmer deployment (general locations where skimmers are working - are they working in the heaviest concentration of oil?)
___ Boom deployment (general locations of boom - does the boom contain oil? Is the oil entraining under the boom?)

Environmental Observations

___ Locations of convergence line, rip tides, and sediment plumes
___ Locations of kelp beds, seagrass beds, and other features that could be mistaken for oil
___ Wildlife present in area (locations and approximate numbers of birds and marine animals)

2.4 AIR MONITORING GUIDELINES

- Air monitoring of the spill location and areas down stream should commence within one (1) hour or as soon as possible.
- Air monitoring will commence at the DOT recommended safe distance of 300 meters
- Monitoring for Lower Explosive Limit (LEL) and Oxygen (O2) will be used to evaluate the necessary evacuation distances and assure safe work locations
- Calibrated LEL/O2 monitors will be used at all work locations
- Monitoring will be conducted upwind and at a safe distance downwind of the release location
- Monitoring will include low areas such as ditches, excavations and vaults where vapors may have collected and saturated soils exist.
- Results of the monitoring will be recorded on Spill Notification Report and communicated to the On scene Commander
- All work locations will be monitored continuously, BP safety rules require that work be stopped and the site evacuated if the LEL is greater than 10 percent or O2 less than 19.5 percent
- Spills of gasoline may require monitoring for the presence of benzene and spills of crude oil may require monitoring for Hydrogen Sulfide (H_2S). A protocol for benzene and H_2S monitoring will be established by the Safety Officer as part of the Safety Plan.

2.5 SPILL VOLUME ESTIMATES

Estimated spill volume is required to:

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

Actual spill volumes are often unavailable or inaccurate so field estimates are usually required. Some rapid estimation methods are:

Catastrophic Failure During Transfer Operations
Multiply the pumping rate by the elapsed time of the leak and add the contents of the line between the closest valves or isolation points. Line volume can be determined using the Valve Effectiveness Study.

Volume Spilled (bbls) = Pump Rate (bbls/min) x Elapsed time (min) + Line Contents (bbls)

Tank Overfills

- Multiply the elapsed time of the leak by the pumping rate.
- Volume spilled (bbls) = elapsed Time (min) x Pump Rate (bbls/min)

Visual Assessment

If a more accurate method is not available, the spill size can be estimated by conducting a visual assessment of the surface area and thickness. Refer to **FIGURE 2.4** for rough approximations of spill volume. These factors may yield unreliable results due to:

- Color interpretation of sheen varies with different observers.
- Appearance of a slick varies depending on available sunlight, sea state, river current and viewing angle.
- Different products behave differently, depending on their properties and local conditions.

FIGURE 2.4 – Spill Estimation Factors

OIL THICKNESS ESTIMATIONS				
Standard Term	Approx. Film Thickness		Approx. Quantity of Oil in Film	
	inches	mm		
Barely Visible	0.0000015	0.00004	25 gallons/mile^2	44 liters/km^2
Silvery	0.000003	0.00008	50 gallons/mile^2	88 liters/km^2
Slightly Colored	0.000006	0.00015	100 gallons/mile^2	179 liters/km^2
Brightly Colored	0.000012	0.0003	200 gallons/mile^2	351 liters/km^2
Dull	0.00004	0.001	666 gallons/mile^2	1,168 liters/km^2
Dark	0.00008	0.002	1,332 gallons/mile^2	2,237 liters/km^2
Thickness of light oils: 0.0010 inches to 0.00010 inches				
Thickness of heavy oils: 0.10 inches to 0.010 inches				

U.S. Coast Guard Field Operations Guide, 2000 Edition

2.5.1 River Current Estimation

River current is an important factor in determining the oil spill trajectory and which Geographic Response Plans can be deployed ahead of the moving slick. A quick estimate of current speed can be obtained using the "stick" method.

To measure by the "stick" method, drop a stick into the main stream of a river and measure the time it takes for the stick to travel 100 feet down stream. See **FIGURE 2.5** to estimate river speed.

FIGURE 2.5 – River Speed using the Stick Method

Time required for Stick to go 100 feet (seconds)	Current Speed (mph)
136	0.5
68	1.0
45	1.5
34	2.0
27	2.5
23	3.0
19	3.5
17	4.0
15	4.5
14	5.0
11	6.0
10	7.0
9	8.0
8	9.0
7	10.0

2.5.2 Oil Slick Velocity / Location Estimate

Based on the estimated nature of stream flows select the probable oil slick velocity (miles/hour):

- Estimate the total time until recovery can start (hours):
  - Estimate the time since the spill was identified
  - Add the time required to mobilize the response equipment and personnel to the control point
  - Add the time to deploy
- Estimate the distance that the spill will advance down stream (miles):
  - Use the total time estimated above
  - Multiply by the current speed estimated in **FIGURE 2.5**.
- Estimate the location of the front of the oil spill:
  - Determine the location on the river where the spill occurred
  - Locate the spill front using the distance downstream estimated above
  - Select a control point downstream of the spill front

2.5.3 Estimating Spill Trajectories

Oil spill trajectories should be estimated in order to predict direction and speed of product movement, impact on shorelines and other sensitive areas, and the most effective location to mobilize spill response resources for protection, containment, and recovery.

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

- Oil moves at approximately the same direction and speed as water currents, unless the winds are strong.
- Multiply wind speed by 0.034 to determine the effect of winds on spill movement.
- The combined effects of winds and currents 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.

2.6 INITIAL CONTAINMENT ACTIONS

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

- Limit the spread of oil, thereby, preventing the oil from impacting water, and reducing the surface area and the shoreline to be cleaned;
- Concentrate the oil, when safe to do so, making physical recovery more efficient; and
- 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; and
- Environmental factors such as wind speed and direction.

2.6.1 Safety Considerations

- Containment actions should not be conducted during inclement weather or unsafe conditions, such as high winds or rapid currents.
- Eliminate all ignition sources.
- Avoid contact with the spilled product and ensure that the area remains secure to air traffic.
- Be aware of potential changes in position and movement of slick due to tidal action.

In the event of emergencies such as fire or explosion requiring services such as rescue, evacuation, traffic control, etc., the first responder will attempt to establish a safe perimeter. Local emergency responders notified via 911 will conduct emergency response activities listed above. Pipeline operations for these situations are addressed in the Olympic Pipe Line Company Operations Maintenance and Emergency Response Manual.

2.7 INCIDENT CLASSIFICATION

To ensure consistency in spill reporting and response, the Company has adopted the spill classification system summarized below.

CLASSIFICATION	SPILL VOLUME
Tier I	Less than 5 barrels
Tier II	5 - 100 barrels
Tier III	More than 100 barrels

2.8 EVACUATION

Evacuation may become necessary to protect personnel and public from hazards associated with an incident. Orderly evacuation is essential to protect the general public as well as company personnel and property. Evacuation routes have been established and posted at each facility. See **FIGURE 2.6** for the Evacuation Checklist.

The Incident Commander (IC) should work with local responders to determine safe evacuation routes early in an incident to reduce confusion if evacuation becomes necessary. Muster points shall be at a safe distance from the incident in an appropriate direction (up wind, up stream, and up grade). If the muster

points do not provide adequate shelter, transportation to a central shelter should be arranged after all personnel are accounted for. Local police, fire, and EMS must be notified of the evacuation as well as the location of the shelter. As the incident progresses, the IC must continuously evaluate the adequacy and necessity of the shelter.

Personnel evacuating their work areas should shut down all operating equipment, secure all sensitive materials, shut off water and electrical power, and follow direction from the runners. Runners will direct personnel to the muster points, account for all personnel, ensure the evacuated area is secured, and report the status of the evacuation to the command post. Evacuated personnel shall remain at the shelter until directed otherwise by the IC.

Local utility companies may be called to secure services to the site if necessary.

FIGURE 2.6 – Evacuation Checklist

ACTION	INITIALS
Determine safe evacuation routes.	
Account for personnel.	
Identify muster points.	
Assign Runners to direct evacuation and account for all personnel.	
Identify adequate shelter.	
Arrange transportation to shelter.	
Shutdown all pumping and transfer systems.	
Shut in and properly secure facility and well sites.	
Close valves.	
Secure all electrical panels.	
Establish a secure perimeter around the evacuated area to prevent unauthorised entry.	
If time allows remove sensitive materials from the work site to prevent theft or damage.	
Account for all personnel.	
Ensure adequate medical care for injured personnel.	
Notify local police, fire and EMS of the evacuated area, the reason for evacuation, and the location of the muster point.	
Notify IMT IC.	
Evaluate the adequacy of and need for shelter.	

SECTION 3
NOTIFICATIONS / TELEPHONE NUMBERS

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3.1 EMERGENCY PRIORITIZED INFORMATION AND NOTIFICATION PROCEDURES

The notification sequence for a spill is as follows:

- The Spill Observer/First Responder will notify the Renton Control Center or Tulsa Control Center (Cherry Point Crude Pipe Line ONLY) and if necessary 911 then identify and control the source of a spill, if safe to do so.

- The Operations Controller will notify the Area O&M Team Leader and the Control Center Team Leader.

- The Control Center Team Leader will notify the District Operations Manager (QI), Alternates, if necessary, and Environmental Coordinator who will make additional notifications as illustrated in the Notifications Flow Chart (**FIGURE 3.1**).

The priority of actions and response procedures will depend upon actual circumstances and will be determined by the Incident Commander. Follow up notifications are the responsibility of the Environmental Coordinator.

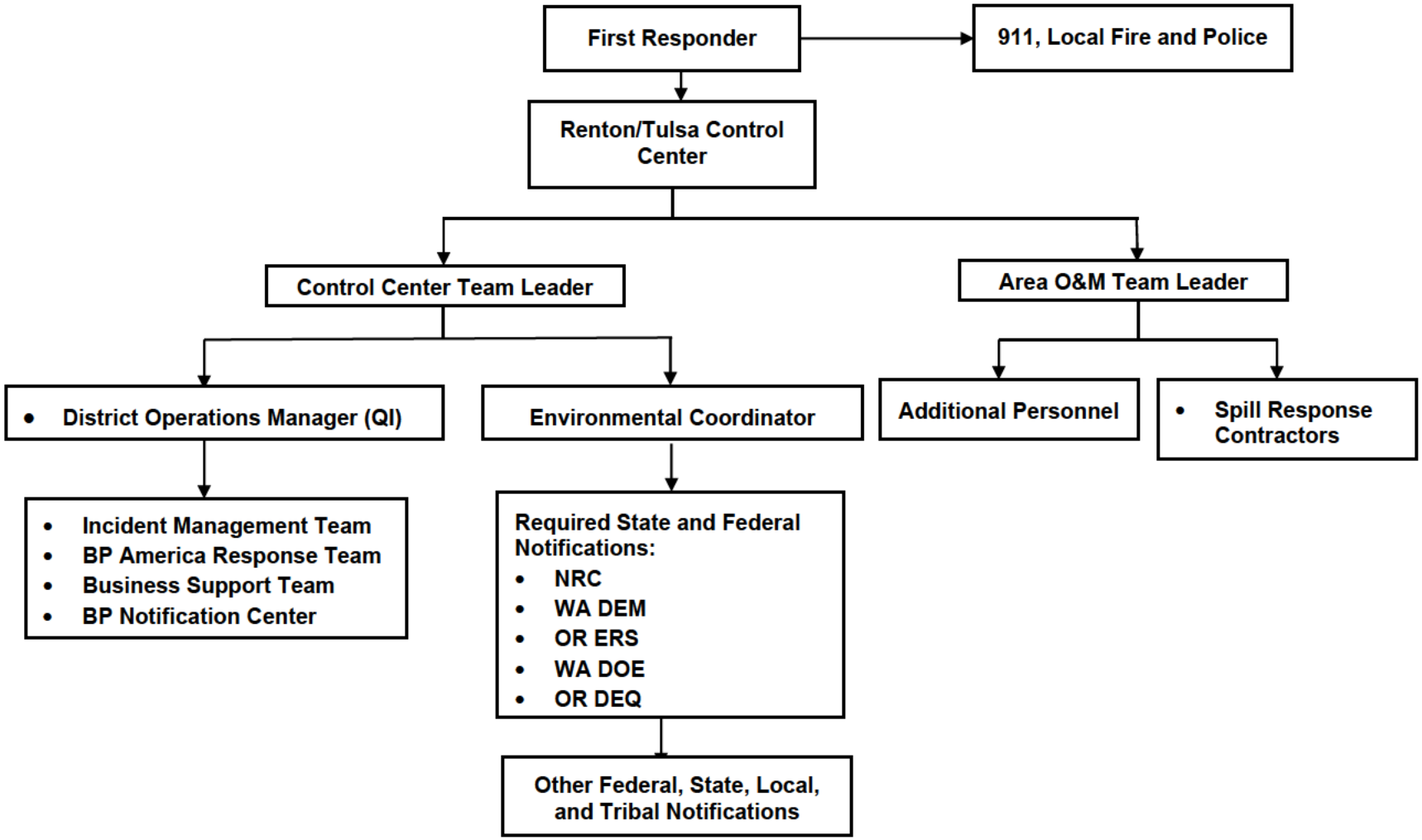
3.2 NOTIFICATION PROCEDURES FOR REPORTS FROM OUTSIDE SOURCES

Notifications for reports from outside sources are as follows:

- The Control Center Operator will notify the Team Leader and Control Center Supervisor.

- If the investigation is from a credible source and is:
  - Conclusive – The Control Center Supervisor will notify the District Manager (QI) and Environmental Coordinator upon spill awareness. The Environmental Coordinator will make all required regulatory notifications.
  - Inconclusive – Within one hour of field personnel arriving on scene, the Control Center Supervisor will notify the District Manager (QI) and Environmental Coordinator if there are indications of a potential release. The Environmental Coordinator will make all required regulatory notifications.

FIGURE 3.1 – Notification Flow Chart



(b) (7)(F)

[redacted]

FIGURE 3.3 – Spill Report Form
Spill Notification Checklist & Report

Date: _____ **Time:** _____

Name of person(s) completing report (list all controllers on-duty):

_____

_____

☐ Discoverer / Responder ☐ Controller* ☐ Other*

*If Controller or Other, information / complaint received from:

☐ Employee/contractor ☐ Public ☐ Other (i.e. agency) _____

Name, address, and phone number of person making report:

_____

_____

( ) _____

Assessment

☐ **Spill** ☐ **Odor Complaint** ☐ **Other** _____

Location: _____

County: _____ **City:** _____ **MP:** _____

If Spill: onto ☐ Land ☐ Water ☐ Containment ☐ Other _____

Nearest Watercourse (name and distance, if known): _____

Source: ☐ Pipe ☐ Tank ☐ Valve ☐ Pump ☐ Fitting ☐ Other _____

Product: ☐ Gasoline ☐ Diesel ☐ Jet ☐ Transmix ☐ Other

Estimated Qty: _____ ☐ gallons ☐ barrels

☐ **Fire** ☐ **Explosion** ☐ **Evacuations** ☐ **Damage** _____ ☐ **N/A**

Number of Injured: ___ **Fatalities:** ___ **Number Evacuated:** ___ **Damage in Dollars:** ___ ☐ **N/A**

Cause: ☐ Equipment Failure ☐ Operator Error ☐ Natural Phenomenon ☐ Unknown

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Raining ☐ Snowing ☐ Other _____

Temperature: _____° F Wind Direction/Velocity _____

Brief Incident Description: _____

_____

_____

FIGURE 3.3 – Spill Report Form (continued)

INITIAL NOTIFICIATIONS

Upon Discovery of a product discharge, the **Spill Observer/First Responder** shall immediately notify:

	Time	Contact
Control Center (888) 271-8880		

If this is believed an emergency, immediately notify 911.

	No	Yes	Time	Contact
Has 911 been notified?				

Immediately upon notification, verification or suspicion of a release, the **Operations Controller** shall:

CONFIRM: Has observer/responder notified 911? ☐ Yes ☐ No

COMPLETE: Assessment information on Page 1 (this may occur after notifications below)

NOTIFY:

	Time	How? (i.e. pager, phone)	Remarks
Area O&M Team Leader			
Control Center Team Leader			

The **Control Center Team Leader** shall notify the following Olympic personnel:

	Time	How? (i.e. pager, phone)	Remarks
Primary: Environmental Coordinator Backup: HSSE Manager			
District Operations Manager			

The **Environmental Coordinator** will notify the HSSE Manager, Government and Public Affairs, and applicable Regulatory Agencies (including local fire departments).

The **District Operations Manager** will make additional internal notifications as necessary (i.e. Business Unit Leader, BP Notification Center) and determine scope of response team to be activated.

Comments:_____

FIGURE 3.3 – Spill Report Form (continued)

Regulatory Agency Notification			
Agency	**Phone Number**	**Time**	**Contact**
National Response Center **Incident #** _____	(800) 424-8802		
Washington State Dept of Emergency Mgmt **Incident #** _____	(800) 258-5990		
Oregon State Response System **Incident #** _____	(800) 452-0311 OR (503) 378-6377		
WUTC	(888) 321-9146		
US Coast Guard – Seattle	(206) 217-6232		
US Coast Guard – Portland	(503) 240-9379		
US EPA Region X	(206) 553-1263		
WA Dept of Ecology – NW	(425) 649-7000		
WA Dept of Ecology – SW	(360) 407-6300		
WA Dept of Fish & Wildlife	(360) 534-8233		
OR Dept Environmental Quality	(800) 452-4011		
City of Portland – Environmental Services (Portland DF – Stormwater Permit)	(503) 823-7180		

County Agency Notification			
Agency	**Phone Number**	**Time**	**Contact**
Whatcom County Emergency Management	(360) 676-6681		
Skagit County Emergency Management	(360) 336-3131		
Snohomish County Emergency Management	(425) 423-7635		
King County Emergency Management	(206) 296-3830		
Pierce County Emergency Management	(253) 798-7470		
Thurston County Emergency Management	(360) 754-3360		
Lewis County Emergency Management	(360) 740-1151		
Cowlitz County Emergency Management	(360) 577-3130		
Clark County Emergency Management	(360) 737-1911		
Multnomah County Emergency Management	(503) 793-7158		

FIGURE 3.4 – Notification and Telephone Numbers

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
A. COMPANY PERSONNEL:			
Renton Control Center	(888) 271-8880*		
BP Notification Center (BART and BUL notification)	(800) 321-8642* (312) 856-2200*		
BP Group Security	(630) 420-4400		
Mitchell, T. Northwest Performance Unit Leader	(678) 837 3802 (Office) (409) 771 8255 (Mobile)*		
Cimaroli, E. District Operations Manager – QI	(630) 386-3241 (Mobile)*		
Barrett, T. OpEx Team Leader – Alternate QI	(425) 981-2538 (Office) (206) 510-0796 (Mobile)*		
Hayashida, K. Engineering Team Leader – Alternate QI	(425) 226-8881 (Office) (206) 571-0066 (Mobile)*		
Abendhoff, M	(360) 371-1519 (Office) (360) 303-5278 (Mobile)*		
Allen, L.	(425) 981-2553 (Office) (206) 423-9154 (Mobile)*		
Anderson, C.	(425) 286-6728 (Office) (206) 786-0658 (Mobile)*		
Babcock, C. Safety Coordinator	(425) 981-2501 (Office) (425) 269-0801 (Mobile)*		
Banker, M.	(425) 235 7751 (Office) (253) 431-0951 (Mobile)*		
Berry, J. South Area Team Lead	(360) 274-5108 (Office) (206) 510-0562 (Mobile)*		
Brady, P.	(425) 981-2506 (Office) (206) 423-2104 (Mobile)*		
Carlton, K. Central Area Team Lead	(425) 235-7711 (Office) (206) 510-0589 (Mobile)*		
Conlan, S. Control Center Team Lead	(425) 227-5209 (Office (206) 786-1532 (Mobile)*		
Dunn, T.	(425) 981-2542 (Office) (206) 419-5497 (Mobile)*		
Durant, E.	(425) 981-2521 (Office) (206) 221-9155 (Mobile)*		
Fraley, J.	(360) 957-0203 (Mobile)*		
Franco, S.	(425) 981-2533 (Office) (206) 510-1221 (Mobile)*		
Gustaf, K. Environmental Coordinator	(425) 235-7743 (Office) (206) 351-1786 (Mobile)		
Malone, T.	(425) 981-2535 (Office) (630) 414-0851 (Mobile)*		
Lopez, R. District Operations Manager – Northwest Terminals	(206) 623-4635 (Office) (206) 730-5063 (Mobile)*		
Johnson, D.	(425) 235-7720 (Office) (206) 510-5879 (Mobile)*		
Johnston, D. North Area Team Lead	(360) 424-0365 (Office) (360) 815-0345 (Mobile)*		
Kaperick, A.	(425) 981-2508 (Office) (206) 510-2396 (Mobile)*		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
A. COMPANY PERSONNEL, CONTINUED:			
Kidd, W	(360) 371-1145 (Office) (360) 303-5349 (Mobile)*		
Makalena, S.	(206) 623-4635 (Office) (206) 391-8190 (Mobile)*		
Mathews, S. HSSE Manager	(425) 981-2534 (Office) (206) 510-0122 (Mobile)*		
Messere, W	(425) 235-7764 (Office)		
Smith, E.	(425) 981-2520 (Office) (206) 510-4016 (Mobile)*		
Swatman, D.	(425) 235-7714 (Office) (253) 606-0444 (Mobile)*		
Te ken, L.	(425) 235-7732 (Office) (206) 786-1635 (Mobile)*		
Young, J.	(425) 981-2585 (Office) (206) 793-9682 (Mobile)*		
Zimmerman, C.	(425) 981-2511 (Office) (206) 510-3446 (Mobile)*		
B. COMPANY FACILITIES:			
Anacortes Pump Station	(360) 293-3551 (Main) (360) 293-8855 (Fax)		
Allen Pump Station	(360) 428-4214 x6007 (Main) (360) 757-1972 (Fax)		
Bayview Products Terminal	(360) 428-4214 (Main) (360) 848-1484 (Fax)		
Castle Rock Pump Station	(360) 274-4361 (Main) (360) 274-8172 (Fax) (360) 274-8385 (Alternate)		
Cherry Point Pump Station	(360) 371-7411 (Main) (360) 371-5614 (Fax)		
Shell Booster	(360) 293-5858 (Main)		
Ferndale Pump Station	(360) 384-4231 (Main) (360) 384-4200 (Fax)		
Linnton Delivery Facility	(503) 286-3272 (Main) (503) 285-8396 (Alternate)		
Olympia Junction	(360) 446-2300 (Main) (360) 446-7842 (Fax)		
Portland Delivery Facility	(503) 286-3997 (Main) (503) 285-8395 (Alternate) (503) 289-7427 (Fax)		
Portland Junction	(503) 222-1528 (Main)		
Renton Control Center	(425) 235-7726 (Main) (888) 271-8880 (Emergency) (206) 235-7717 (Fax)		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
B. COMPANY FACILITIES, CONTINUED:			
Renton Admin Office	(425) 981-2518 (Main) (425) 981-2525 (Fax)		
Renton Office	(425) 235-7736 (Main) (425) 271-5320 (Fax)		
Sea-Tac Delivery Facility	(206) 246-0247 (Swissport)		
Seattle Delivery Facility	(206) 682-1211 (Main) (206) 343-7488 (Fax)		
Tacoma Pump Station	(253) 271-0341 (Main) (253) 271-7946 (Fax)		
Tacoma Delivery Facility	(253) 627-2505 (Main) (253) 627-1447 (Fax)		
Tacoma Junction	(253) 271-0341 x2529 (Main)		
Tesoro Booster	(360) 293-5555 (Main)		
Vancouver Junction	(360) 695-8723 (Main)		
Vancouver Delivery Facility	(360) 693-1364 (Main) (360) 693-8255 (Fax)		
Woodinville Pump Station	(425) 398-3846 (Main) (425) 481-1666 (ROW) (425) 483-9022 (Fax)		
C. MANDATORY NOTIFICATIONS:			
National Response Center (NRC)	(800) 424-8802* (202) 267-2675*		
Washington State Department of Emergency Management	(800) 258-5990* (800) OILS-911*		
Oregon State Emergency Management Division	(800) 452-0311* (503) 378-6377*		
U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA)	(202) 366-4000 (202) 366-4595		
County Department of Emergency Management	Area 911		
Washington Department of Ecology - NW	(425) 649-7000		
Washington Department of Ecology - SW	(360) 407-6300		
EPA Region X - Seattle	(206) 553-1263* or (206) 553-1264*		
D. NOTIFICATIONS AS APPROPRIATE:			
Federal Agencies			
U.S. Coast Guard – Sector Seattle	(206) 217-6232*		
U.S. Coast Guard - Sector Portland	(503) 240-9301*		
EPA Region X - Seattle	(206) 553-1263* or (206) 553-1264*		
NOAA Office of Response and Restoration - Seattle	(206) 526-6317* (206) 526-6329 (Fax)		
National Weather Service Seattle	(206) 526-6087 (206) 424-2000 (#9000) after hrs.		
Federal Bureau of Investigation Seattle	(206) 622-0460		
U.S. Fish and Wildlife Service Environmental Contaminants Olympia, WA Portland, OR	(360) 753-5821 (503) 231-6223		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
D. NOTIFICATIONS AS APPROPRIATE, CONTINUED:			
Federal Agencies, Continued:			
U.S. Army Ft. Lewis Haz. Waste Management	(253) 967-4786		
U.S. Army Ft. Lewis Environmental Division	(253) 967-5646		
U.S. Army Ft. Lewis Fire Department	(253) 967-7161		
U.S. Navy Naval Shipyard	(360) 476-3466		
U.S. Navy Naval Base Seattle	(206) 526-3225		
U.S. Navy Supervisor of Salvage	(202) 695-0231		
Department of Interior Environmental Affairs	(503) 231-6157		
Nisqually National Wildlife Refuge	(360) 753-9467		
State Agencies:			
WUTC	(888) 321-9146*		
Washington Department of Ecology - NW	(425) 649-7000		
Washington Department of Ecology - SW	(360) 407-6300		
Oregon Department of Environmental Quality	(800) 452-4011		
Washington Highway Patrol (Emergency Only)	(360) 757-1175*		
Oregon Emergency Response System	(800) 452-0311 or (503) 378-6377*		
Washington State Department of Fish and Wildlife			
Oil Spill Response Team/Hydraulic Project Approval	(360) 534-8233* (360) 902-2537 (After Hours)		
North Puget Sound Region 4 (Mill Creek) (King, Skagit, Snohomish, and Whatcom Counties)	(425) 775-1311		
Southwest Washington Region 5 (Vancouver) (Lewis, Cowlitz and Clark Counties)	(360) 696-6211		
Coastal Washington Region 6 (Montesano) (Thurston and Pierce Counties)	(360) 249-4628		
Washington State Department of Natural Resources (Regional)	(360) 856-3500		
Washington Department of Parks and Recreation	(360) 755-9231		
Washington State Fire Marshall	(360) 753-0433		
Oregon Department of Fish and Wildlife	(503) 872-5255, x5591 or 5587		
Local Agencies:			
Whatcom County Emergency Management	(360) 676-6681		
Skagit County Emergency Management	(360) 428-3250 (360) 336-3131		
Snohomish County Emergency Management	(425) 388-5060		
King County Emergency Management	(206) 296-3830		
Pierce County Emergency Management	(253) 798-6595		
Thurston County Emergency Management	(360) 754-3360		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
D. NOTIFICATIONS AS APPROPRIATE, CONTINUED:			
Local Agencies, Continued:			
Lewis County Emergency Management	(360) 740-1151		
Cowlitz County Emergency Management	(360) 577-3130		
Clark County Emergency Management	(360) 737-1911		
Multnomah County Emergency Management	(503) 793-7150		
Tribal Councils:			
Lummi Nation/Natural Resource Department	(360) 384-2225		
Muckleshoot Indian Tribal Council	(253) 939-3311		
Nisqually Indian Community Council	(360) 456-5221		
Nisqually Tr bal Police	(360) 459-9603		
Nooksack Indian Tribal Council	(360) 592-5176		
Puyallup Tribal Council	(253) 597-6200		
Squamish Tribal Council.	(360) 598-3311		
Stillaquamish Board of Directors	(360) 652-7362		
Upper Skagit Tribal Council	(360) 856-5501		
E. PRIMARY OIL SPILL RESPONSE CONTRACTORS:			
Clean Rivers Cooperative	(503) 228-4261*		
NRC Environmental Services	(800) 337-7455*		
Marine Spill Response Corporation (MSRC)	(425) 252-1300* (800) 259-6772*		
F. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
CLARK COUNTY:			
***Fire Services:* 911 or (360) 696-4461**			
Clark County Fire District 5	(360) 759-4404		
Vancouver Fire Department	(360) 696-8166		
Medical Services:			
Memorial Urgent Care Clinic	(360) 696-5232		
Southwest Washington Medical Center	(360) 256-2000		
Accommodations:			
Best Western Inn of Vancouver	(360) 254-4000		
Comfort Inn	(360) 574-6000		
Ramada Inn	(360) 253-5000		
COWLITZ COUNTY:			
***Fire Services:* 911 or (360) 577-3098**			
County Wide Dispatch	(360) 577-3098		
Castle Rock Fire Department			
Fire District #1 -- Woodland			
Fire District #2 - Kelso			
Fire District #3 - Toutle			
Fire District #5 - Kalama			
Fire District #6 - Castle Rock			
Kelso Fire Department			
Longview Fire Department			
Medical Services:			
Saint John Medical Center	(360) 423-1530		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
F. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY, CONTINUED:			
COWLITZ COUNTY, Continued:			
Accommodations:			
Cowlitz Comfort Inn	(360) 425-4600		
Cowlitz Red Lion	(360) 636-4400 (800) 733-5466		
Kelso Super 8 Motel	(360) 423-8880		
KING COUNTY:			
***Fire Services:* 911 or (206) 296-3311**			
Valley Com Dispatch	(253) 852-2121		
Auburn /Kent/Tukwila			
Burien/Normandy Park Fire District #2 - Seattle			
Des Moines Fire District #26			
Fire District #24 - Sea-Tac			
Skyway Fire District #20 - Seattle			
Federal Way Fire Department	(253) 839-6234		
Renton Fire District #25	(253) 852-2121		
Fife Fire Department	(253) 627-0151		
Bellevue/Redmond	(425) 452-6917		
Fire District #16 - Kenmore	(425) 486-2784		
Kirkland Fire Department	(425) 587-3400		
North Highline Fire District - Seattle	(206) 243-0330		
Sea-Tac Fire Department	(253) 852-2121		
Seattle Fire Department	(206) 386-1498		
Medical Services:			
Harbor View Medical Center	(206) 731-3241		
Overlake Hospital	(425) 688-5000		
Swedish Medical Center	(206) 386-6000		
Valley Medical Center	(425) 251-5185		
Virginia Mason Hospital	(206) 624-1144		
Accommodations:			
Red Lion - Bellevue	(425) 455-5240		
Days Inn - Bellevue	(425) 643-6644		
Holiday Inn - Renton	(425) 226-7700		
Holiday Inn – SeaTac	(206) 248-1000		
Days Inn - SeaTac	(206) 244-3600		
Best Western Inn - Seattle	(206) 448-9444		
Days Inn - Tacoma	(253) 475-5900		
LEWIS COUNTY:			
***Fire Services:* 911 or (360) 740-1105**			
Centralia Fire Department	(360) 330-7681		
Chehalis Fire Department	(360) 748-3394		
Fire District #2 - Toledo	(360) 864-2366		
Fire District #6 - Chehalis	(360) 748-6019		
Fire District #15 - Winlock	(360) 785-4221		
Napavine Fire Department	(360) 262-3320		
Medical Services:			
Capitol Medical Center	(360) 754-5858		
Providence Hospital	(360) 736-2803		
Saint Peter Hospital	(360) 493-7289		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
F. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY, CONTINUED:			
LEWIS COUNTY, Continued:			
Accommodations:			
King Oscar Motel	(360) 736-1661		
MULTNOMAH COUNTY, OR:			
***Fire Services:* 911 or**			
Fire Marshal	(503) 731-3423		
Portland Fire Bureau	(503) 823-3700		
Medical Services:			
Good Samaritan Hospital & Medical Center	(503) 413-7711		
Providence Medical Center	(503) 215-1111		
Accommodations:			
Courtyard by Marriott	(503) 735-1818		
Red Lion Inn at The Quay	(360) 694-8341		
PIERCE COUNTY:			
***Fire Services:* 911 or (253) 798-7470**			
Central Pierce Fire & Rescue #6, 7, 9 - Tacoma	(253) 588-5217		
Fife Fire District - Tacoma	(253) 627-0151		
Fort Lewis Fire Department	(253) 967-2427		
North Puyallup Fire District #11 - Puyallup	(253) 841-5432		
Riverside Fire District #14 - Puyallup	(253) 841-5432		
Roy/Lacamas/McKenna District #17	(253) 588-5217		
Medical Services:			
Allenmore Hospital	(253) 459-6633		
Good Samaritan Hospital	(253) 848-6661		
Saint Claire Hospital	(253) 588-1711		
Saint Joseph Hospital	(253) 627-4101		
Tacoma General Hospital	(253) 403-1000		
Accommodations:			
Days Inn - Clover Park	(253) 475-5900		
SKAGIT COUNTY:			
***Fire Services:* 911 or (360) 336-3146**			
County Wide Dispatch	(360) 336-3131		
Alger Fire Station	(360) 724-3451		
Glen Oak Fire Station	(360) 424-7296		
Anacortes Fire Station	(360) 293-1925		
Burlington Fire Station	(360) 755-0261		
Conway Fire Station	(360) 445-5041		
Edison-Bow Fire Station	(360) 766-3125		
La Conner Fire Station	(360) 466-3125		
Mount Vernon Fire Department	(360) 336-6277		
Medical Services:			
Cascade Valley Hospital	(360) 435-2133		
Skagit Valley Hospital	(360) 424-4111		
Whidbey General Hospital	(360) 678-5151		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
F. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY, CONTINUED:			
SKAGIT COUNTY, Continued:			
Accommodations:			
Best Western Cotton Tree Inn	(360) 428-5678		
Best Western College Inn	(360) 424-4287		
County Inn	(360) 293-3494		
Ship Harbor Inn	(360) 293-5177		
SNOHOMISH COUNTY:			
***Fire Services:* 911 or (425) 407-3930**			
Everett Fire Department	(425) 257-8100		
Fire District #7 - Clearview	(360) 668-5357		
Fire District #8 - Lake Stevens	(425) 334-3034		
Fire District #11 - Everett	(425) 257-8140		
Fire District #13 & #15 - Marysville	(425) 651-5080		
Fire District #14 - Stanwood	(360) 629-3011		
Fire District #21 & #22 - Arlington	(425) 258-2484		
Marysville Fire Department	(360) 363-8500		
Medical Services:			
Cascade Valley Hospital	(360) 435-2133		
Everett Medical Center	(425) 261-1500		
Providence General Hospital	(425) 258-7555 (425) 258-7123		
Providence General Medical Center	(426) 261-3000		
Stevens Hospital	(425) 640-4000		
Accommodations:			
Arlington Motor Inn	(360) 652-9595		
Best Western Tulalip Inn	(360) 659-4488		
Best Western Cascadia Inn	(425) 258-4141		
Quality Inn	(425) 337-2900		
THURSTON COUNTY:			
***Fire Services:* 911 or (360) 704-2740**			
Fire District #2 - Yelm	(360) 458-2799		
Fire District #3 - Lacey	(360) 491-9555		
Fire District #4 - Rainier	(360) 446-2419		
Fire District #6 - East Olympia	(360) 491-5533		
Olympia Fire Department	(360) 753-8348		
Fire District #9	(360) 273-5060		
Fire District #12 - Tenino	(360) 264-4116		
Fire District #15 - Tumwater	(360) 754-2745		
Medical Services:			
Capitol Medical Center	(360) 754-5858		
Saint Peter Hospital	(360) 493-7289		
Accommodations:			
Clarion Hotel	(360) 352-7200		
Best Western Tumwater Inn	(360) 956-1235		
Olympia Quality Inn	(360) 943-4710		
The Governor Hotel	(360) 352-7700		
Red Lion Olympia Hotel	(360) 943-4000		
WHATCOM COUNTY:			
***Fire Services:* 911 or (360) 676-6711**			
County Wide Dispatch	(360) 676-6811		
Bellingham Fire Department			

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
F. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY, CONTINUED:			
WHATCOM COUNTY, Continued:			
Fire Services, Continued:			
Fire District #2 - Bellingham	(360) 676-6811		
Fire District #3 - Bellingham			
Fire District #6 - Bellingham			
Fire District #7 - Ferndale			
Fire District #8 - Bellingham			
Fire District #9 - Lake Samish			
Fire District #17 - Ferndale			
Medical Services:			
Saint Joseph Hospital	(360) 734-5400		
United General Hospital	(360) 856-6021		
Accommodations:			
Bellingham Comfort Inn	(360) 738-1100		
Bellingham Days Inn	(360) 671-6200		
Best Western Heritage Inn	(360) 647-1912		
Best Western Lakeway Inn	(360) 671-1011		
Hampton Inn Bellingham	(360) 676-7700		
G. MEDIA (Seattle Area):			
TV:			
KWPX-TV	(206) 386-8033		
KSTW	(206) 441-1111		
KIRO	(206) 728-7777		
KOMO	(206) 443-4000		
KING	(206) 448-5555		
KONG	(206) 448-3166		
KCPQ	(206) 674-1313		
Radio:			
KRIZ/KYIZ	(206) 329-7880		
KBLE	(206) 324-2000		
KOMO/KPLZ/KVI	(206) 223-5700		
KISW	(206) 421-5479		
KMTT	(206) 233-1037		
Newspaper:			
Kent Reporter	(425) 204-7838		
Renton Reporter	(425) 271-6673		
Seattle Post Intelligencer	(206) 870-7851		
Seattle Times	(206) 464-2000		
H. OTHER PIPELINE 24 HR EMERGENCY:			
Puget Sound Energy	(888) 225-5773		
Terasen Pipeline	(888) 876-6711		
Williams Gas Pipeline	(800) 972-7733		
I. REFINERY and DELIVERY POINT CONTACTS:			
Refineries:			
BP	(360) 371-1107		
Phillips 66	(360) 384-8283		
Tesoro	(360) 293-9145		
Shell	(360) 293-1758		

FIGURE 3.4 – Notification and Telephone Numbers (continued)

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
I. REFINERY and DELIVERY POINT CONTACTS			
Delivery Points:			
Allen Station Bayview-PSE	(360) 424-0253	Out of Service	
Renton DF Phillips 66	(425) 228-6142		
Seattle DF Shell Kinder Morgan BP	(206) 224-0489 (206) 682-4706 (206) 623-4635		
SeaTac SwissPort	(206) 246-0247		
Tacoma DF Phillips 66 (T1) Nustar Terminal	(253) 627-3878 (253) 627-5711		
Tacoma Station PP-Spanaway	(253) 847-1961	Out of Service	
Vancouver DF Tesoro	(360) 696-2390		
Linnton DF Kinder Morgan	(503) 286-1691		
Portland DF BP Nustar	(503) 286-8254 (503) 286-6701 (Main) (503) 539-7610 (Cell)		
Portland Jct Kinder Morgan Shell Chevron Phillips 66 McCall	(503) 220-1246 (503) 226-3571 (503) 221-7866 (503) 248-1565 (503) 221-5755		

FIGURE 3.5 - Spill Response Contractors

Company	Location	Phone Number	Haz Mat	Vac Truck	Vessel/ Water	Pipeline/ Construct	Tanks	Disposal	GeoTech/ Enviro	Safety/ IH	Air
Alaska Continental Pipeline	Toledo WA	(360) 864-8866 (360) 425-9223	X			X					
Arctic Air Service	Astoria OR	(503) 861-3700									X
Baker Tanks	Seattle WA	(425) 487-6503					X				
Barr Air Patrol	Vancouver WA	(214) 629-8346 (206) 730-4292									X
Bureau Veritas	Seattle WA	(206) 763-7364							X	X	
Classic Helicopter	Seattle WA	(206) 767-0515									X
Clean Rivers Cooperative	Portland OR	(503) 220-2040	X		X						
Cowlitz Clean Sweep Inc.	Longview WA	(888) 423-6316	X	X	X						
Delta Environmental (ANTEA)	Bellevue WA	(800) 477-7411							X		
GeoEngineers	Redmond WA	(425) 861-6056	X						X		
Heritage Environmental		(800) 321-8642						X			
IBRRC (International Bird Rescue Research Center)	Fairfield CA	(707) 207-0380							X		
Innovac	Edmonds WA	(206) 819-3737		X							
Marine Spill Response Corp (MSRC)	Everett WA	(800) 259-6772 24 hr dispatch	X		X						
Matrix Service Inc.	Bellingham WA	(360) 676-4905	X	X		X					
NRC Environmental. Services	Seattle/Astoria/Portland	(800) 337-7455 24 hr dispatch	X	X	X	X	X				
Olson Bros Pro Vac Clean Service	Kent WA	(425) 432-8005	X	X	X						
Pacific Industrial Resources	Kent/Spokane	(253) 437-0785	X	X							
Snelson Company	Mount Vernon WA	(360) 856-6511	X			X					
Sound Tanks	Bellevue WA	(425) 455-2668	X				X				
URS	Seattle WA	(206) 910-5365	X						X		
Western Refinery Service	Bellingham WA	(360) 366-3303	X	X							

FIGURE 3.6 - Agency Notification Requirements

AGENCY	NOTIFICATION REQUIREMENT	REPORT
National Response Center (NRC)	**EPA** Any spill that causes a film or sheen on navigable waters, adjoining shorelines, or the contiguous zone, or which may affect natural resources under exclusive US Authority. **USDOT/PHMSA** Telephonic notification is required within 2 hours following the discovery of a release that resulted in any one of the events listed under DOT and that resulted in criteria listed there. Report any failure in a pipeline in which there is a release of a hazardous liquid. The failure criteria are as follows: • Caused a death or personal injury requiring hospitalization; • Resulted in either a fire or an explosion not intentionally set by the operator; • Caused estimated damage to the property of the operator or others or both, exceeding $50,000; • Resulted in the pollution of any stream, river, lake, reservoir, or other similar body of water or emulsion beneath the surface of the water or upon adjoining shorelines; • In judgment of the operator was significant, even though it did not meet the criteria listed above.	The NRC is then responsible for notifying other Federal agencies. A report must then be filed with the EPA (**FIGURE 3.3**) Reports must include the following: a. Name and address of the operator. b. Name and telephone number of report. c. Location of the failure. d. Time of the failure. e. Fatalities and personal injuries, if any. f. All other significant facts known by the operator that is relevant to the cause of the failure or extent of the damages.

FIGURE 3.6 - Agency Notification Requirements (continued)

AGENCY	NOTIFICATION REQUIREMENT	REPORT
Washington Emergency Management Division (EMD) or Oregon Emergency Management Division	All spills of oil into State Waters or the environment must be reported State waters include the following: Washington's marine waters, estuaries, rivers, lakes, streams, creeks, ponds, springs, wetlands, underground (ground) water sources, sewers, storm drains, beaches, ditches, and snow banks.	Report shall include: 1. Names of reporting party and company 2. Contact phone number(s) 3. Material, quantity, concentration, and location of spill 4. Cleanup status 5. Responsible party

SECTION 4
RESPONSE TEAM ORGANIZATION

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4.3 Incident Management Team Member Response Times 2
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4.1 INCIDENT MANAGEMENT TEAM DESCRIPTION

The Incident Management Team (IMT) is composed of Company personnel organized to plan for and manage oil spills. The IMT will develop strategies and priorities for response, supervise contractors, handle safety and security matters, and provide logistics 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 **FIGURE 4.4**. The IMT will train by participating in exercises as noted in **APPENDIX A**.

4.2 INCIDENT MANAGEMENT TEAM ACTIVATION PROCEDURES

Activation of the IMT may be accomplished in stages. Initially, the First Responder assumes the role of Incident Commander. During a spill incident, the initial Incident Commander (IC) may be able to respond without assistance from the IMT. If the situation requires more resources, he may request additional manpower or management support from the IMT. This request is made to the District Manager (Qualified Individual). Depending on the situation, the Qualified Individual (QI) may then assume the role of Incident Commander. The QI will call out other IMT members. IMT activation procedures are illustrated in **FIGURE 4.1**.

4.3 INCIDENT MANAGEMENT TEAM MEMBER RESPONSE TIMES

The Incident Commander and the IMT will mobilize to the Renton Office Emergency Operations Center. The IMT's maximum expected arrival time during off hours is one hour. The maximum expected arrival time for company and contractor personnel responding to the scene of a spill is one hour.

4.4 BP AMERICA RESPONSE TEAM DESCRIPTION

The BP America Response Team (BART) is a national team made up of approximately 250 trained business unit and resource personnel with skills and experience in the Incident Command System (ICS) who provide emergency services to any BP business for crisis level or extended incidents. A table detailing BART member training is included in **APPENDIX A**. The team is designed to have at least six individuals identified for each ICS Section Chief position, with 2-10 individuals identified for each Unit leader and Technical Specialist role. Most BART members will come from local and regional business response teams who are very familiar with their individual business needs and capabilities.

BART is notified and activated by the Olympic Pipe Line Company Incident Commander using the Automatic Notification System. Activation telephone numbers are included in **FIGURE 3.3**. BART members may supplement local and regional teams or provide a full incident management team. The Incident Commander may activate specific members with specialized skills, backup support to extended response, or request a full scale deployment for a major incident.

In most incidents, the entire BART will be notified (not activated) and provided information about the incident. This is to prepare everyone for possible activation. If specific BART members are needed, they will be activated via the Automatic Notification System. Response times depend on location of the incident, traffic, weather, etc. Under most circumstances, BART members stationed in the greater Puget Sound area (approximately 30) have a 2-6 hour response time. BART members based elsewhere on the West Coast (Alaska to Los Angeles, approximately 90 members) can respond within 12 hours. BART members based in the Gulf Coast, East Coast, and mid-continent region are expected to respond within 24 hours.

4.5 INCIDENT COMMAND SYSTEM/UNIFIED COMMAND

The Incident Command System (ICS) is used as the method of integrating federal, state and local agencies into the IMT. This system organizes diverse responding agencies into one unified team. Olympic Pipe Line Company uses the Incident Command System outlined in the 2000 FOG.

ICS includes a Unified Command Structure consisting of key On-Scene Coordinators: Federal On-Scene Coordinator (FOSC), State On-Scene Coordinator (SOSC), Local On-Scene Coordinator (LOSC), Tribal On Scene Coordinator (TOSC) and the Responsible Party Incident Commander. These entities share decision-making authority as the Incident Command and consult with each other regarding spill response management issues. The FOSC will coordinate all federal agencies involved in the response. The SOSC will coordinate all state involved in the response activities. The LOSC will coordinate local agencies involved in the response. The TOSC will coordinate tribal agencies involved in the response. The Responsible Party Incident Commander will coordinate all company activities. A model IMT organization chart for the Unified Command is shown in **Figure 4.3.**

Depending upon the size and complexity of the incident, additional federal and state agency personnel may integrate into the other functions of the IMT. The turnover of personnel in functional roles of the response is recognised as a critical activity of the IMT. In order to assure that the incoming response staff are properly briefed into their assigned role the checklist found in **FIGURE 4.1** should be completed by all transitions of the Command Staff, Section Chief, Unit Leader and Branch Director positions.

FIGURE 4.1 - CHECKLIST TO FACILITATE TRANSITION OF IMT MEMBERS FOR SHIFT CHANGE OR OPERATIONAL PERIOD

ICS Position_____
Incoming IMT member_____
Outgoing IMT member_____

For use by Command Staff, Section Chiefs, Unit Leaders and Branch Directors

No.	Action Completed or Considered for Transition	Yes/No	
1	Can the transition be accomplished with minimal disruption to ongoing response operations?	☐ Yes	☐ No
2	Have incoming IMT members and contractors:		
	Received the required safety briefings and security clearances?	☐ Yes	☐ No
	Checked into the main ICP?	☐ Yes	☐ No
	Received their organizational assignments?	☐ Yes	☐ No
3	Has adequate work space been provided for arriving IMT members and contractors?	☐ Yes	☐ No
4	Have members of the Unified Command been properly briefed on the roles that will be assumed by IMT members and contractors?	☐ Yes	☐ No
5	Has the outgoing IMT IC / Section Chiefs fully briefed the incoming IMT staff regarding:		
	General Response Objectives and priorities?	☐ Yes	☐ No
	Problems and solutions being addressed?	☐ Yes	☐ No
	Incident potential?	☐ Yes	☐ No
6	Is the new chain of command clear to incoming IMT members:		
	In the ICP?	☐ Yes	☐ No
	In the field?	☐ Yes	☐ No
7	Have appropriate delegations of responsibilities been made within the Staff / Section?	☐ Yes	☐ No
8	Have outgoing IMT Section personnel properly briefed incoming IMT Section personnel on?	☐ Yes	☐ No
9	Has the ICS 207 Organization Chart been updated to reflect the new staff assignments?	☐ Yes	☐ No

4.6 QUALIFIED INDIVIDUAL

The Qualified Individual (QI), as the IMT IC, oversees the management of the entire response, establishes the response priorities and objectives, serves as the liaison with Corporate management and works with the State and Federal On-Scene Coordinators in Unified Command. The QI is an English-speaking representative, available on a 24-hour basis, 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 (40 CFR Parts 9 and 112, 49 CFR Part 194):

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

For further information on Qualified Individual's training, refer to **APPENDIX A**. Phone numbers for Qualified Individuals are listed in **FIGURE 3.4**.

FIGURE 4.2 - INCIDENT MANAGEMENT TEAM ACTIVATION PROCEDURE

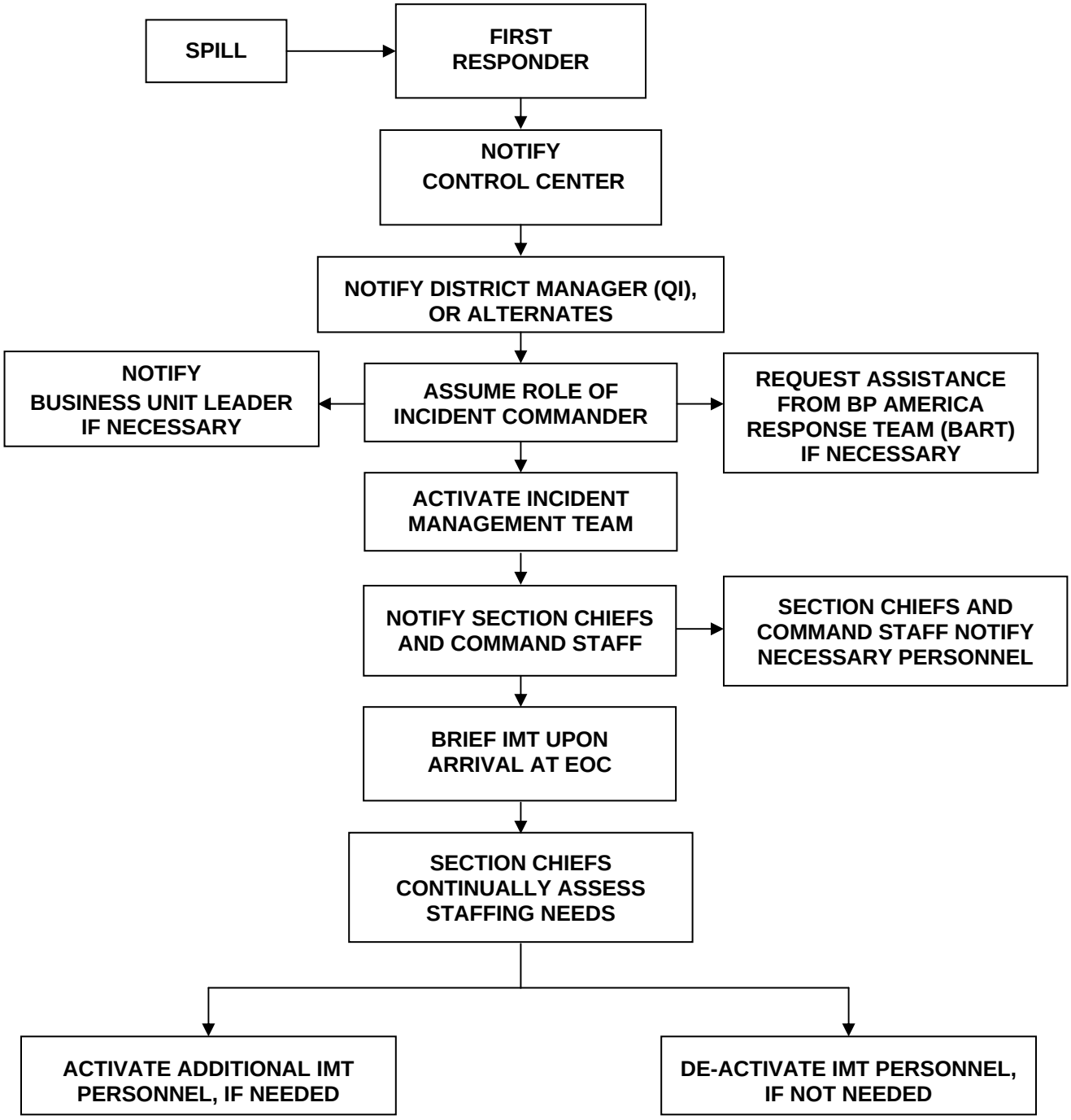

FIGURE 4.3 – UNIFIED COMMAND ORGANIZATION CHART

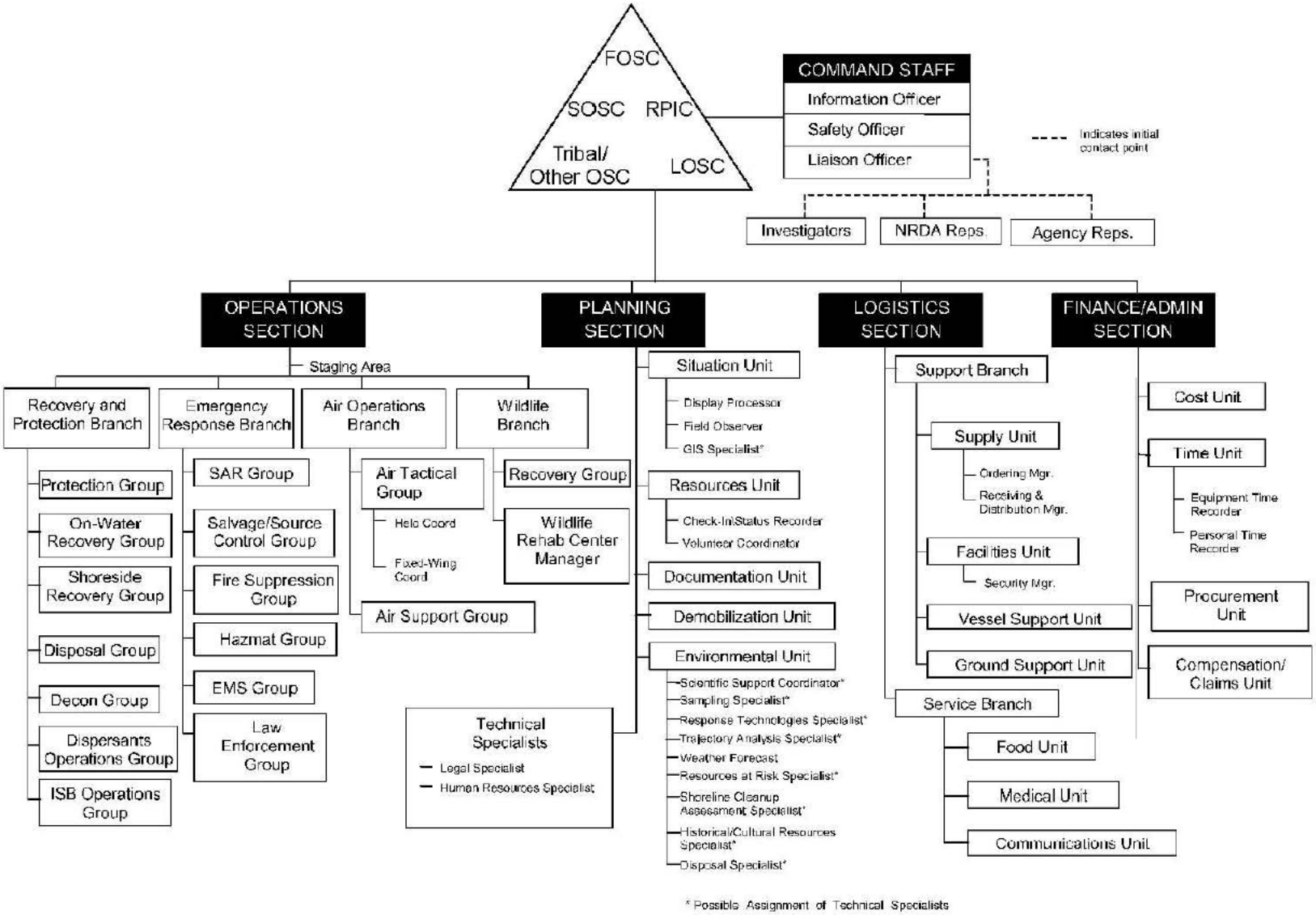

FIGURE 4.4 - INCIDENT MANAGEMENT TEAM ORGANIZATION CHART

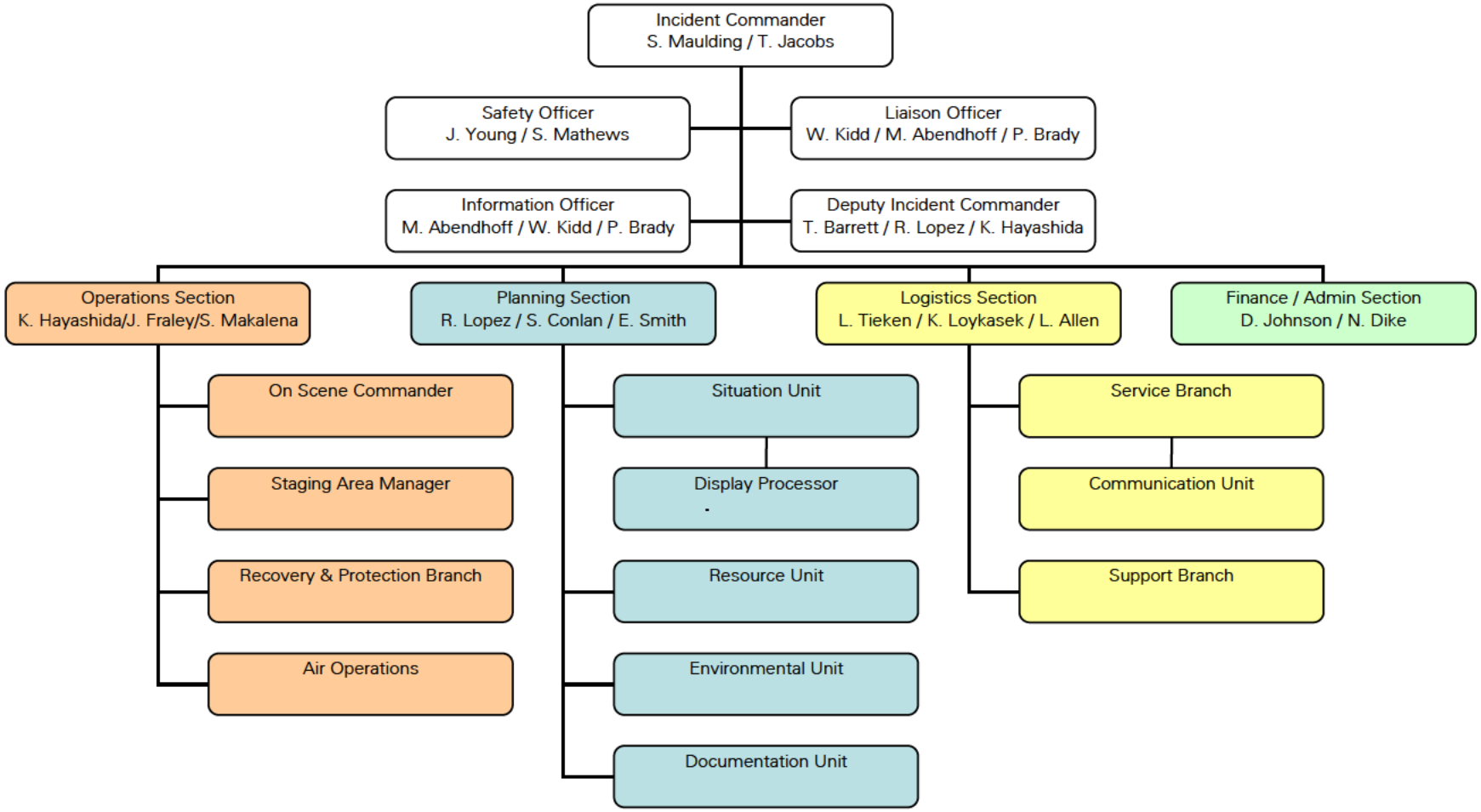

FIGURE 4.5 - INCIDENT MANAGEMENT TEAM JOB DESCRIPTION CHECKLISTS

The following job description checklists are intended to be used as a tool to assist Spill Management Team members in their particular positions within the Incident Command System (ICS) System. The position descriptions and checklists were derived from the Field Operations Guide (FOG).

The following are responsibilities applicable to all ICS personnel:

Common Responsibilities	Initials	Date & Time
1. Receive assignment, notification, reporting location, reporting time, and travel instructions from your home agency.		
2. Upon arrival at the incident, check-in at designated check in locations. Check-in locations may be found at: • Incident Command Post • Base or Camps, Staging Areas, Helibases, Division Supervisors (for direct line assignments).		
3. Agency representatives from assisting or cooperating agencies report to Liaison Officer at Command Post after checking in.		
4. All radio communications to Incident Communications Center will be addressed: "(Incident Name) Communications".		
5. Use clear text and ICS terminology (no codes) in all radio transmissions.		
6. Receive briefing from immediate supervisor		
7. Acquire work materials.		
8. Organize, assign and brief subordinates.		
9. Complete forms and reports required of the assigned position and send material through supervisor to Documentation Unit.		
10. Respond to demobilization orders.		
11. Brief subordinates regarding demobilization.		

Common responsibilities that must be accomplished by all Unit Leaders include (these responsibilities are not repeated in each Unit listing):

Unit Leader Responsibilities	Initials	Date & Time
1. Participate in incident planning meetings, as required.		
2. Determine current status of unit activities.		
3. Confirm dispatch and estimated time of arrival of staff and supplies.		
4. Assign specific duties to staff; supervise staff.		
5. Determine resource needs.		
6. Develop and implement accountability, safety and security measures for personnel and resources.		
7. Supervise demobilization of unit, including storage of supplies.		
8. Provide Supply Unit Leader with a list of supplies to be replenished.		
9. Maintain unit records, including Unit/Activity Log.		

The Qualified Individual/Incident Commander has access to senior management personnel that will establish company policies and ensures that the Incident Commander has the resources and support necessary to activate and sustain response operations.

Qualified Individual	Initials	Date & Time
1. Obtain an Initial Incident Briefing from the Incident Commander.		
2. Brief appropriate senior management personnel and request that they identify and alert personnel that may be needed to support, control, and/or respond either to Renton or the spill scene.		
3. Obtain an itinerary for the appropriate senior management personnel such that they can be contacted and/or readily assembled in the event that managerial decisions or input are needed to support, control, and/or respond.		
4. Arrange for the use of Company personnel as requested by the Incident Commander necessary to support, control, and/or response operations.		
5. Facilitate senior management review and approval of proposed information and press releases.		
6. Brief senior management on the status of control and/or response operations.		
7. Keep the Incident Commander informed of relevant senior management decisions affecting response operations.		
8. Serve as a contact person for high level government agencies not directly involved in response operations.		
9. Authorize the utilization of resources as requested by the Incident Commander.		
10. Contact senior management of other companies, as necessary, to request use of third party manpower and/or equipment resources to support response operations.		
11. Facilitate senior management review and approval of proposed information and press release.		
12. Transmit a copy of notes and relevant observations made during the response effort to the documentation Unit Leader		
13. Maintain contact with high level government officials.		
Points to Consider		
1. Government agencies directly involved in response operations will look to the Incident Commander for prompt, firm decisions on matters relating to control and/or response operations. The Qualified Individual must tailor his/her involvement in response operations to reinforce rather than undermine the Incident Commander's authority to commit company resources and make strategic and tactical decisions.		
2. Prompt decisions by senior management personnel are imperative to the success of the response effort.		

Incident Commanders for oil discharges will be organized under the Unified Command structure which includes, but is not limited to:

- The predesignated Federal On Scene Coordinator (FOSC) acting under the authority of the National Contingency Plan (NCP);
- The predesignated State On Scene Coordinator (SOSC) representing state and local response agencies; and,
- The representation of the Responsible Party (RP).

The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development and implementation of strategic decisions and approves the ordering and releasing of resources. The Unified Command may activate Deputy Incident Commanders to assist in carrying out Incident Command responsibilities.

Incident Commander	Initials	Date & Time
1. Review Common Responsibilities.		
2. Assess the situation and/or obtain incident briefing from prior Incident Commander.		
3. Determine Incident Objectives and Strategies in accordance with Area Contingency Plan(s) (ACP).		
4. Establish the immediate priorities.		
5. Establish an Incident Command Post.		
6. Establish an appropriate organization.		
7. Brief Command Staff and Section Chiefs.		
8. Ensure planning meetings are scheduled as required.		
9. Approve and authorize the implementation of an Incident Action Plan.		
10. Determine information needs and advise Command and General Staff.		
11. Coordinate activity for all Command and General Staff.		
12. Manage incident operations.		
13. Approve requests for additional resources and requests for release of resources.		
14. Approve the use of trainees, volunteers, and auxiliary personnel.		
15. Authorize release of information to news media.		
16. Ensure incident funding is available.		

Incident Commander	Initials	Date & Time
17. Notify Natural Resource Damage Assessment (NRDA) and coordinate NRDA Team.		
18. Coordinate incident investigation responsibilities.		
19. Seek appropriate legal counsel.		
20. Order demobilization of the incident when appropriate.		

The Information Officer, a member of the Command Staff, is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.

Only one Information Officer will be assigned for each incident, including incidents operating under the Unified Command and multi-jurisdictional incidents. The Information Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions if warranted.

Information Officer	Initials	Date & Time
1. Review Common Responsibilities.		
2. Determine from the Incident Commander if there are any limits on information release.		
3. Develop material for use in media briefings.		
4. Obtain Incident Commander approval for media releases.		
5. Inform media and conduct media briefings.		
6. Arrange for tours and other interviews or briefings that may be required.		
7. Obtain media information that may be useful to incident planning.		
8. Maintain current information summaries and/or displays of the incident and provide information on the status of the incident to incident personnel.		
9. Maintain Unit/Activity Log.		

The Safety Officer, a member of the Command Staff, is responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. The Safety Officer will correct unsafe acts or conditions through the regular line of authority, although the Officer may exercise emergency authority to stop or prevent unsafe acts when immediate actions are required. The Safety Officer maintains awareness of active and developing situations, ensures the preparation and implementation of the Site Safety Plan, and includes safety messages in each Incident Action Plan.

Safety Officer	Initials	Date & Time
1. Review Common Responsibilities.		
2. Identify hazardous or unsafe situations associated with the incident by ensuring the performance of preliminary and continuous site characterization and analysis which shall include the identification of all actual or potential physical, biological, and chemical hazards known or expected to be present on site.		
3. Participate in planning meetings to identify any health and safety concerns inherent in the operations daily work plan.		
4. Review the Incident Action Plan for safety implications.		
5. Exercise emergency authority to stop and prevent unsafe acts.		
6. Investigate accidents that have occurred within the incident areas.		
7. Ensure the preparation and implementation of the Site Specific Health and Safety Plan (HASP) in accordance with the Area Contingency Plan (ACP) and State and Federal OSHA regulations. The HASP shall at minimum address, include, or contain the following elements: • Health and Safety hazard analysis for each site task or operation. • Comprehensive operations work plan. • Personnel training requirements. • PPE selection criteria. • Site specific occupational medical monitoring requirements. • Air monitoring plan: area/personal. • Site control measures. • Confined space entry procedures “only if needed”. • Pre-entry briefings (tailgate meetings) initial and as needed. • Pre-operations health and safety conference for all incident participants. • Quality assurance of HASP effectiveness.		
8. Assign assistants and manage the incident safety organization.		
9. Review and approve the medical plan.		
10. Maintain Unit/Activity Log.		

Incidents that are multi-jurisdiction, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff.

Liaison Officer	Initials	Date & Time
1. Review Common Responsibilities.		
2. Provide a point of contact for assisting and cooperating Agency Representatives.		
3. Identify Agency Representatives from each agency including communications link and location.		
4. Maintain a list of assisting and coordinating interagency contacts.		
5. Assist in establishing and coordinating inter-agency contacts.		
6. Keep agencies supporting incident aware of incident status.		
7. Monitor incident operations to identify current or potential inter-organizational issues and advise Incident Commander as appropriate.		
8. Participate in planning meetings, provide current resource status information, including limitations and capabilities of assisting agency resources.		
9. Maintain Unit/Activity Log.		

The Operations Section Chief, a member of the General Staff, is responsible for the management of all operations directly applicable to the primary mission. The Operations Chief activates and supervises elements in accordance with the Incident Action Plan and directs its execution; activates and executes the Site Safety Plan; directs the preparation of unit operational plans, requests or releases resources, makes expedient changes to the Incident Action Plan as necessary, and reports such to the Incident Commander.

Operations Section Chief	Initials	Date & Time
1. Review Common Responsibilities.		
2. Develop operations portion of Incident Action Plan.		
3. Brief and assign operations personnel in accordance with Incident Action Plan.		
4. Supervise the execution of the Incident Action Plan for Operations.		
5. Request resources needed to implement the Operations tactics as part of the Incident Action Plan development.		
6. Ensure safe tactical operations.		
7. Make or approve expedient changes to the Incident Action Plan during operational period as necessary.		
8. Approve suggested list of resources to be released from assigned status (not released from the incident).		
9. Assemble and disassemble teams/task forces assigned to operations section.		
10. Report information about changes in the implementation of the IAP, special activities, events, and occurrences to Incident Commander as well as to Planning Section Chief and Information Officer.		
11. Maintain Unit/Activity Log.		

Under the Operations Section Chief, the Staging Area Manager is responsible for managing all activities within the designated staging areas.

Staging Area Manager	Initials	Date & Time
1. Review Common Responsibilities.		
2. Implement pertinent sections of the Incident Action Plan.		
3. Establish and maintain boundaries of staging areas.		
4. Post signs for identification and traffic control.		
5. Establish check-in function, as appropriate.		
6. Determine and request logistical support for personnel and/or equipment, as needed.		
7. Advise Operations Section Chief of all changing situation/ conditions on scene.		
8. Respond to requests for resource assignments.		
9. Respond to requests for information, as required.		
10. Demobilize or reposition staging areas, as needed.		
11. Maintain Unit/Activity Log (ICS 214).		

The Branch Directors when activated, are under the direction of the Operations Section Chief, and are responsible for the implementation of the portion of the Incident Action Plan appropriate to the Branches.

Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Develop with subordinates alternatives for Branch control operations.		
3. Attend planning meetings at the request of the Operations Chief.		
4. Review Division/Group Assignment Lists.		
5. Assign specific work tasks to Division/Group Supervisors.		
6. Supervise Branch operations.		
7. Resolve logistics problems reported by subordinates.		
8. Report to Operations Chief when: Incident Action Plan is to be modified; additional resources are needed; surplus resources are available; hazardous situations or significant events occur.		
9. Approve accident and medical reports (home agency forms) originating within the Branch.		
10. Maintain Unit/Activity Log.		

The Division and/or Group Supervisor reports to the Operations Section Chief or Branch Director when activated. The supervisor is responsible for the implementation of the assigned portion of the Incident Action Plan, assignment of resources within the division/group, and reporting on progress of control operations and status of resources within the division/group.

Division/Group Supervisor	Initials	Date & Time
1. Review Common Responsibilities.		
2. Implement Incident Action Plan for division group.		
3. Provide available Incident Action Plan to team/task force leaders.		
4. Identify geographic areas or functions assigned to the divisions and groups.		
5. Review division/group assignments and incident activities with subordinates and assign tasks.		
6. Ensure that Incident Communications and/or Resources Unit is advised of all changes in status of resources assigned to the division and/or group.		
7. Coordinate activities with other divisions.		
8. Determine need for assistance on assigned tasks.		
9. Submit situation and resources status information to Branch Director or Operations Section Chief.		
10. Report special occurrences or events such as accidents or sickness to the immediate supervisor.		
11. Resolve logistics problems within the division/group.		
12. Participate in the development of Branch plans for the next operational period.		
13. Maintain Unit/Activity Log.		

The Air Operations Branch Director, who is ground based, is primarily responsible for preparing the air operations portion of the Incident Action Plan (**ICS 220 oil**). The Incident Action Plan will reflect agency restrictions that have an impact on the operational capability or utilization of resources such as night flying or hours per pilot. After the Incident Action Plan is approved, air operations is responsible for implementing its strategic aspects, those that relate to the overall incident strategy as opposed to those that pertain to tactical operations like specific target selection. Additionally, the Air Operations Director is responsible for providing logistical support to helicopters operating on the incident. Specific tactical activities including target selection, or suggested modifications to specific tactical actions in the Incident Action Plan, are normally performed by the Air Tactical Supervisor working with ground and air resources.

Air Operations Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Organize preliminary air operations.		
3. Request declaration of cancellation of restricted airspace.		
4. Participate in planning meetings as required.		
5. Participate in preparation of the Incident Action Plan.		
6. Perform operational planning for air operations.		
7. Prepare and provide Air Operations Summary Worksheet to the Air Support Group and Fixed-Wing Bases.		
8. Determine coordination procedures for use by air organization with Branches, Divisions, or Groups.		
9. Coordinate with appropriate Operations Section personnel.		
10. Supervise all air operations activities associated with the incident.		
11. Establish procedures for emergency reassignment of aircraft.		
12. Schedule approved flights of non-incident aircraft in the restricted air space area.		
13. Inform the Air Tactical Group Supervisor of the air traffic situation external to the incident.		
14. Resolve conflicts concerning non-incident aircraft.		
15. Coordinate with Federal Aviation Agency.		
16. Update air operations plans.		
17. Report to the Operations Section Chief on air operations activities.		
18. Arrange for an incident investigation team when warranted.		
19. Maintain Unit/Activity Log.		

The Recovery and Protection Branch Director is responsible for overseeing and implementing the protection, containment and clean-up activities established in the Incident Action Plan. The Recovery and Protection Branch Director reports to the Operations Section Chief.

Recovery and Protection Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Participate in planning meetings as required.		
3. Develop operations portion of Incident Action Plan.		
4. Brief and assign operations personnel in accordance with Incident Action Plan.		
5. Supervise operations.		
6. Determine resource needs.		
7. Review recommendations and initiate release of resources.		
8. Report information about special activities, events, and occurrences to Operations Section Chief.		
9. Maintain Unit/Activity Log.		

Under the Recovery and Protection Branch Director, the On Water Recovery Group Supervisor is responsible for managing on water recovery operations in compliance with the Incident Action Plan. The Group may be further divided into teams, task forces and single resources.

On Water Recovery Group Supervisor	Initials	Date & Time
1. Review Common Responsibilities.		
2. Implement Recovery Strategies in Incident Action Plan.		
3. Direct, coordinate and assess effectiveness of on water recovery actions.		
4. Modify protective actions as needed.		
5. Brief the Recovery and Protection Branch Director on activities.		
6. Maintain Unit/Activity Log.		

Under the Recovery and Protection Branch Director, the Shoreside Recovery Group Supervisor is responsible for managing shoreline clean-up operations in compliance with the Incident Action Plan. The Group may be further divided into Strike Teams, Task Forces and Single Resources.

Shoreside Recovery Group Supervisor	Initials	Date & Time
1. Review Common Responsibilities.		
2. Implement Recovery Strategies in Incident Action Plan.		
3. Direct, coordinate and assess effectiveness of shoreside recovery actions.		
4. Modify protective actions as needed.		
5. Brief the Recovery and Protection Branch Director on activities.		
6. Maintain Unit/Activity Log.		

Under the Recovery and Protection Branch Director, the Disposal Group Supervisor is responsible for coordinating the on-site activities of personnel engaged in collecting, storing, transporting, or disposing of waste materials. Depending on the size and location of the spill, the disposal groups may be further divided into Strike Teams, Task Forces, and single resources.

Disposal Group Supervisor	Initials	Date & Time
1. Review Common Responsibilities		
2. Implement disposal portion of the Incident Action Plan.		
3. Ensure compliance with all hazardous waste laws and regulations.		
4. Maintain accurate records of recovered material.		
5. Brief Recovery and Protection Branch Director on activities.		
6. Maintain Unit/Activity Log (ICS 214).		

Under the Recovery and Protection Branch Director, the Decontamination Group Supervisor is responsible for decontamination of personnel and response equipment in compliance with approved statutes.

Decontamination Group Supervisor	Initials	Date & Time
1. Review Common Responsibilities.		
2. Implement Decontamination Plan.		
3. Determine resource needs.		
4. Direct and coordinate decontamination activities.		
5. Brief Safety Officer on conditions.		
6. Brief Recovery and Protection Branch Director on activities.		
7. Maintain Unit/Activity Log (ICS 214)		

The Emergency Response Branch Director is primarily responsible for overseeing and implementing emergency measures to protect life, mitigate further damage to the environment, and stabilize the situation.

Emergency Response Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Participate in planning meetings, as required.		
3. Develop operations portion of Incident Action Plan.		
4. Supervise operations.		
5. Determine need for, and request, additional resources.		
6. Review suggested list of resources to be released and initiate recommendation for release of resources.		
7. Report information about special activities, events, and occurrences to Operations Section Chief.		
8. Maintain Unit/Activity Log (ICS 214).		

The Wildlife Branch Director is responsible for minimizing wildlife losses during spill responses; coordinating early aerial and ground reconnaissance of wildlife at the spill site, and reporting results to the Situation Unit Leader; employing wildlife hazing measures as authorized in the Incident Action Plan; and recovering and rehabilitating impacted wildlife. A central wildlife processing center should be identified and maintained for: evidence tagging, transportation, veterinary services, treatment and rehabilitation, storage, and other support needs. The activities of private wildlife care groups, including those employed by the responsible party, will be overseen and coordinated by the Wildlife Branch Director.

Wildlife Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Develop Wildlife Branch portion of the Incident Action Plan.		
3. Supervise Wildlife Branch operations.		
4. Determine resource needs.		
5. Review suggested list of resources to be released and initiate recommendation for release of resources.		
6. Assemble and disassemble Strike Teams/Task Forces assigned to the Wildlife Branch.		
7. Report information about special activities, events, and occurrences to Operations Section Chief.		
8. Maintain Unit/Activity Log (ICS 214).		

The Planning Section Chief, a member of the General Staff, is responsible for the collection, evaluation, dissemination and use of information about the development of the incident and status of resources. Information is needed to: 1) understand the current situation, 2) predict probable course of incident events, and 3) prepare alternative strategies for the incident.

Planning Section Chief	Initials	Date & Time
1. Review Common Responsibilities.		
2. Activate Planning Section Units.		
3. Assign available personnel already on site to ICS organizational positions as appropriate.		
4. Collect and process situation information about the incident.		
5. Supervise preparation of the Incident Action Plan.		
6. Provide input to the Incident Command and Operations Sections Chief in preparing the Incident Action Plan.		
7. Participate in planning and other meetings as required.		
8. Establish information requirements and reporting schedules for all ICS organizational elements for use in preparing the Incident Action Plan.		
9. Determine need for any specialized resources in support of the incident.		
10. Provide Resources Unit with the Planning Section's organizational structure including names and locations of assigned personnel.		
11. Assign Technical Specialists where needed.		
12. Assemble information on alternative strategies.		
13. Assemble and disassemble teams and task forces as necessary.		
14. Provide periodic predictions on incident potential.		
15. Compile and display incident status summary information.		
16. Provide status reports to appropriate requesters.		
17. Advise General Staff of any significant changes in incident status.		
18. Incorporate the incident Traffic Plan (from Ground Support Unit), Vessel Routing Plan (from Vessel Support Unit) and other supporting plans into the Incident Action Plan.		
19. Instruct Planning Section Units in distribution and routing of incident information.		
20. Prepare recommendations for release of resources for submission to members of Incident Command.		
21. Maintain Section record.		
22. Maintain Unit/Activity Log.		

The Situation Unit Leader is responsible for the collection and evaluation of information about the current and possible future status of the spill response operations. This responsibility includes the compilation of information regarding the type and amount of spilled, the amount of oil recovered, the oil's current location and anticipated trajectory, and impacts on natural resources. This responsibility includes providing information to the GIS Specialist(s) for the creation of maps to depict the current and possible future situation and the preparation of reports for the Planning Section Chief.

Situation Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing and special instructions from the Planning Section Chief.		
4. Participate in planning meetings as required.		
5. Prepare and maintain Command Post Display.		
6. Collect and maintain most current incident data.		
7. Prepare periodic predictions as requested by the Planning Section Chief.		
8. Prepare, post and disseminate resource and situation status information as required in the Incident Information Center.		
9. Prepare the Incident Status Summary.		
10. Provide status reports to appropriate requesters.		
11. Provide photographic services and maps.		

The Display Processor is responsible for displaying incident status information obtained from field observers, resource status reports, aerial and ortho photographs, and infrared data.

Display Processor	Initials	Date & Time
1. Review Common Responsibilities.		
2. Determine: • Location of work assignments. • Numbers, types, and locations of displays required. • Priorities. • Map requirements for Incident Action Plan. • Time limits for completion. • Field Observer assignments and communications means.		
3. Obtain necessary equipment and supplies.		
4. Obtain copy of Incident Action Plan for each operational period.		
5. Assist Situation Unit Leader in analyzing and evaluating field reports.		
6. Develop required displays within time limits.		

The Field Observer is responsible to collect situation information from personal observations at the incident and provide this information to the Situation Unit Leader.

Field Observer	Initials	Date & Time
1. Review Common Responsibilities.		
2. Determine: • Location of work assignments. • Type of information required. • Priorities. • Time limits for completion. • Method of communication. • Method of transportation.		
3. Obtain copy of Incident Action Plan for the Operational Period.		
4. Obtain necessary equipment and supplies.		
5. Perform Field Observer responsibilities including, but not limited to, the following: • Perimeters of incident. • Locations of oil. • Rates of spread. • Weather conditions. • Hazards. • Progress of operation resources.		
6. Identify all facility locations (e.g., helispots, Division, and Branch boundaries).		
7. Report information to Situation Unit Leader by established procedure.		
8. Report immediately any condition observer which may cause danger or safety hazard to personnel.		
9. Gather information that will lead to accurate predictions.		

The Resources Unit Leader (RESTAT) is responsible for maintaining the status of all resources (primary and support) at an incident. RESTAT achieves this through development and maintenance of a master list of all resources, including check-in, status, current location, etc. This unit is also responsible for preparing parts of the Incident Action Plan (**ICS 203, 204 & 207**) and compiling the entire plan in conjunction with other members of the ICS, (e.g., Situation Unit, Operations, Logistics) and determines the availability of resources.

Resources Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities		
3. Obtain briefing and special instructions from the Planning Section Chief.		
4. Participate in Planning Meetings as required.		
5. Establish check-in function at incident locations.		
6. Using the Incident Briefing, prepare and maintain the Command Post display (organizational chart and resource allocation and deployment sections of display).		
7. Establish contacts with incident facilities and begin maintenance of resource status.		
8. Gather, post and maintain incident resource status.		
9. Maintain master roster of all resources checked in at the incident.		
10. Prepare Organization Assignment List and Organization Chart.		
11. Prepare appropriate parts of assignment lists.		
12. Provide status reports to appropriate requesters.		

The Documentation Unit 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 shall 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.

Documentation Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing and special instructions from Planning Section Chief.		
4. Participate in Planning Meetings as required.		
5. Establish and organize incident files.		
6. Establish duplication service and respond to requests.		
7. File copies of all official forms and reports.		
8. Check on accuracy and completeness of records submitted for files and correct errors or omissions by contacting appropriate ICS units.		
9. Provide incident documentation to appropriate requesters.		

The Demobilization Unit Leader is responsible for developing the Incident Demobilization Plan, and assisting Sections/Units in ensuring that orderly, safe, and cost-effective demobilization of personnel and equipment is accomplished.

Demobilization Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities		
3. Obtain briefing and special instructions from Planning Section Chief.		
4. Review incident resource records to determine probable size of demobilization effort.		
5. Participate in planning meetings, as required.		
6. Evaluate logistics and transportation capabilities required to support demobilization.		
7. Prepare and obtain approval of Demobilization Plan, including required decontamination.		
8. Distribute Demobilization Plan to each processing point.		
9. Ensure that all Sections/Units understand their responsibilities within the Demobilization Plan.		
10. Monitor implementation and assist in coordinating the Demobilization Plan.		
11. Brief Planning Section Chief on progress of demobilization.		
12. Provide status reports to appropriate requesters.		

The Environmental Unit Leader is responsible for environmental matters associated with the response, including strategic assessment, modeling, surveillance, and environmental monitoring and permitting. The Environmental Unit prepares environmental data for the Situation Unit. Technical Specialists frequently assigned to the Environmental Unit include the Scientific Support Coordinator and Specialists for Sampling, Response Technologies, Trajectory Analysis, Weather Forecast, Resources at Risk, Shoreline Cleanup Assessment, Historical/Cultural Resources, and Disposal Technical.

Environmental Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Obtain briefing and special instructions from Planning Section Chief.		
3. Participate in planning section meetings.		
4. Identify sensitive areas and recommend response priorities.		
5. Determine the extent, fate, and effects of contamination.		
6. Acquire, distribute, and provide analysis of weather forecasts.		
7. Monitor the environmental consequences of cleanup actions.		
8. Develop shoreline cleanup and assessment plans.		
9. Identify the need for, and prepare, any special advisories or orders.		
10. Identify the need for, and obtain, permits, consultations, and other authorizations.		
11. Identify and develop plans for protection of affected historical/cultural resources.		
12. Evaluate the opportunities to use various Response Technologies.		
13. Develop disposal plans.		
14. Develop plan for collecting, transporting, and analyzing samples.		

The Legal Specialists will act in an advisory capacity during an oil spill response.

Legal Specialist	Initials	Date & Time
1. Review Common Responsibilities.		
2. Participate in planning meetings if requested.		
3. Advise Unified Command on legal issues relating to in-situ burning, use of dispersants and other alternative response technology.		
4. Advise Unified Command on legal issues relating to Natural Resource Damage Assessment (NRDA).		
5. Advise Unified Command on legal issues relating to investigation.		
6. Advise Unified Command on legal issues relating to finance and claims.		
7. Advise Unified Command on response related issues.		
8. Maintain Unit/Activities Log.		

The Logistics Section Chief, a member of the General Staff, is responsible for providing facilities, services, material in support of the incident and for all financial and cost analysis aspects of the incident. The Logistics Section Chief participates in development and implementation of the Incident Action Plan and activates and supervises Branches and Units within the Logistics Section.

Logistics Section Chief	Initials	Date & Time
1. Review Common Responsibilities.		
2. Plan organization of Logistics Section.		
3. Assign work locations and preliminary work tasks to Section personnel.		
4. Notify Resources Unit of Logistics Section units activated including names and locations of assigned personnel.		
5. Assemble and brief Branch Directors and Unit Leaders.		
6. Participate in preparation of Incident Action Plan.		
7. Identify service and support requirements for planned and expected operations.		
8. Provide input to and review Communications Plan, Medical Plan, Traffic Plan, and Vessel Routing Plan.		
9. Coordinate and process requests for additional resources.		
10. Review Incident Action Plan and estimate Section needs for next operational period.		
11. Advise on current service and support elements of the Incident Action Plan.		
12. Prepare service and support elements of the Incident Action Plan.		
13. Estimate future service and support requirements.		
14. Receive Demobilization Plan from Planning Section.		
15. Recommend release of unit resources in conformance with Demobilization Plan.		
16. Ensure general welfare and safety of Logistics Section personnel.		
17. Maintain Unit/Activity Log.		

The Service Branch Director, 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 Director supervises the operations of the Communications, Medical, and Food Units.

Service Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Obtain working materials form Logistics Kit.		
3. Determine level of service required to support operations.		
4. Confirm dispatch of Branch personnel.		
5. Participate in planning meeting of Logistics Section Personnel.		
6. Review Incident Action Plan.		
7. Coordinate activities of Service Branch Units.		
8. Inform Logistics Section Chief of activities.		
9. Resolve Service Branch problems.		
10. Maintain Unit/Activity Log.		

The Communications Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief is responsible for developing plans for the effective use of incident communications equipment and facilities; installing and testing of communications equipment; supervision of the incident Communications Center; distribution of communications equipment to incident personnel; and the maintenance and repair of communications equipment.

Communications Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtaining briefing from Service Branch Director of Logistics Section Chief.		
4. Determine unit personnel needs.		
5. Advise on communications capabilities/limitations.		
6. Prepare and implement the incident Radio Communications Plan.		
7. Ensure the Incident Combinations Center and Message Center are established.		
8. Set up telephone and public address system.		
9. Establish appropriate communications distribution/maintenance locations.		
10. Ensure communications systems are installed and tested.		
11. Ensure an equipment accountability system is established.		
12. Ensure personal portable radio equipment for cache is distributed per radio plan.		
13. Provide technical information as required on: Adequacy of communications systems currently in operation. Geographic limitation on communications systems. Equipment capabilities. Amount and types of equipment available. Anticipated problems in the use of communications equipment. Supervise Communications Unit activities.		
14. Supervise Communications Unit activities.		
15. Maintain records on all communications equipment as appropriate.		
16. Ensure equipment is tested and repaired.		
17. Recover equipment for relieved or released units.		
18. Maintain Unit/Activity Log.		

The Medical Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief, is primarily responsible for the development of the Medical Emergency Plan, obtaining medical aid and transportation for injured and ill incident personnel, and preparation of reports and records. The Medical Unit may also assist Operations in supplying medical care and assistance to civilian casualties at the incident, but is not intended to provide medical services to the public.

Medical Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing from Service Branch Director or Logistics Section Chief.		
4. Participate in Logistics Section/Service Branch planning activities.		
5. Determine level of emergency medical activities performed prior to activation of Medical Unit.		
6. Activate Medical Unit.		
7. Prepare the Medical Emergency Plan.		
8. Prepare procedures for major medical emergency.		
9. Declare major medical emergency as appropriate.		
10. Respond to requests for medical aid.		
11. Respond to requests for medical transportation.		
12. Respond to requests for medical supplies.		
13. Prepare medical reports and submit as directed.		
14. Maintain Unit/Activity Log.		

The Food Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief, is responsible for determining feeding requirements at all incident facilities; menu planning; determining cooking facilities required, food preparation; serving; providing potable water; and general maintenance of the food service areas.

Food Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtaining briefing from Service Branch Director of Logistics Section Chief.		
4. Determine location of working assignment, and number and location of personnel to be fed.		
5. Determine method of feeding to best fit each situation.		
6. Obtain necessary equipment and supplies to operate food service facilities.		
7. Set up Food Unit equipment.		
8. Prepare menus to ensure incident personnel receive well-balanced meals.		
9. Ensure that sufficient portable water is available to meet all incident needs.		
10. Ensure that all appropriate health and safety measures are taken.		
11. Supervise cooks and other Food Unit personnel.		
12. Keep inventory of food on hand and check in food orders.		
13. Provide supply Unit Leader food supply orders.		
14. Maintain Unit/Activity Log.		

The Support Branch Director, when activated, is under the direction of the Logistics Section Chief, and is responsible for development of and implementation of logistic plans in support of the Incident Action Plan, including providing personnel, equipment, facilities, and supplies to support incident operations. The Support Branch Director supervises the operation of the Supply, Facilities, Ground Support, and Vessel Support Units.

Support Branch Director	Initials	Date & Time
1. Review Common Responsibilities.		
2. Identify Support Branch personnel dispatched to the incident.		
3. Determine initial support operations in coordination with the Logistics/Finance Section Chief and Service Branch Director		
4. Prepare initial organization and assignments for support operations.		
5. Determine resource needs.		
6. Maintain surveillance of assigned unit work progress and inform Logistics/Finance Section Chief of activities.		
7. Resolve problems associated with requests from Operations Section.		
8. Maintain Unit/Activity Log.		

The Supply Unit Leader is primarily responsible for ordering personnel, equipment and supplies; receiving, and storing all supplies for the incident; maintaining an inventory of supplies; and servicing non-expendable supplies and equipment.

Supply Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain a briefing from the Support Branch Director or Logistics Section Chief.		
4. Participate in Logistics Section/Support Branch planning activities.		
5. Provide Kits to Planning, Logistics and Finance Sections.		
6. Determine the type and amount of supplies enroute.		
7. Arrange for receiving ordered supplies.		
8. Review Incident Action Plan for information on operations of the Supply Unit.		
9. Develop and implement safety and security requirements.		
10. Order, receive, distribute, and store supplies and equipment and coordinate contracts and resource orders with the Finance Section.		
11. Receive and respond to requests for personnel, supplies, and equipment.		
12. Maintain inventory of supplies and equipment.		
13. Coordinate service of reusable equipment.		
14. Submit reports to the Support Branch Director.		
15. Maintain Unit/Activity Log.		

The Facilities Unit Leader is primarily responsible for the layout and activation of incident facilities (e.g. Base, Camp(s), and Incident Command Post). The Facilities Unit provides sleeping and sanitation facilities for incident personnel and manages base and camp operations. Each facility (base or camp) is assigned a manager who reports to the Facilities Unit Leader and is responsible for managing the operation of the facility. The basic functions or activities of the Base and Camp Manager are to provide security service and general maintenance. The Facility Unit Leader reports to the Support Branch Director.

Facilities Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtaining briefing from Service Branch Director of Logistics Section Chief.		
4. Review Incident Action Plan.		
5. Participate in Logistics Section/Support Branch planning.		
6. Determine requirements for each facility to be established.		
7. Determine requirements for the Incident Command Post.		
8. Prepare layout of incident facilities.		
9. Notify unit leaders of facility layout.		
10. Activate incident facilities.		
11. Provide Base and Camp Managers.		
12. Obtain personnel to operate facilities.		
13. Provide sleeping facilities.		
14. Provide security services.		
15. Provide facility maintenance services - sanitation, lighting, and clean up.		
16. Demobilize base and camp facilities.		
17. Maintain Facilities Unit records.		
18. Maintain Unit/Activity Log.		

The Vessel Support Unit Leader is primarily responsible for 1) coordinating transportation of personnel, supplies, food, and equipment for waterborne resources; 2) fueling, servicing, maintaining, and repairing vessels and other vessel support equipment; and 3) implementing the Vessel Routing Plan; and 4) supporting out-of-service waterborne resources.

Vessel Support Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain a briefing from the Support Branch Director or Logistics Chief.		
4. Participate in Support Branch/Logistics Section planning activities.		
5. Coordinate Vessel Routing Plan development.		
6. Coordinate vessel transportation assignments with the Protection and Recovery Branch or other sources of vessel transportation.		
7. Coordinate water-to-land transportation with Ground Support Unit, as necessary.		
8. Maintain a prioritized list of transportation requirements to be scheduled with the transportation source.		
9. Support out-of-service vessel resources, as requested.		
10. Arrange for fueling, maintenance, and repair of vessel resources, as requested.		
11. Maintain inventory of support and transportation vessels.		
12. Maintain Unit/Activity Log (ICS 214).		

The Ground Support Unit Leader is primarily responsible for: 1) support out-of-service resources, 2) coordination of transportation of personnel, supplies, food, and equipment, 3) fueling, service, maintenance and repair of vehicles and other ground support equipment, and 4) implementing the Traffic Plan for the incident.

Ground Support Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing from Support Branch Director of Logistics Section Chief.		
4. Participate in Support Branch/Logistics Section planning activities.		
5. Coordinate development of the Traffic Plan with the Planning Section.		
6. Support out-of-service resources.		
7. Notify Resources Unit of all status changes on support and transportation vehicles.		
8. Arrange for and activate fueling, maintenance and repair of ground transportation resources.		
9. Maintain inventory of support and transportation vehicles (**ICS 218**).		
10. Coordinate transportation services.		
11. Maintain usage information on rented equipment.		
12. Requisition maintenance and repair supplies (e.g. fuel, spare parts).		
13. Coordinate the maintenance of incident roads.		
14. Submit reports to the Support Branch Director as directed.		
15. Maintain Unit/Activity Log.		

The Finance/Administration Section Chief, a member of the General Staff, is responsible for all financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

Finance/Administration Section Chief	Initials	Date & Time
1. Review Common Responsibilities.		
2. Attend briefing with responsible agency to gather information.		
3. Attend planning meeting to gather information on overall strategy.		
4. Determine resource needs.		
5. Develop an operating plan for Finance/Administration function on incident.		
6. Prepare work objectives for subordinates, brief staff, making assignments, and evaluate performance.		
7. Inform members of the Unified Command and General Staff when Section is fully operational.		
8. Meet with assisting and cooperating agency representatives as required.		
9. Provide input in all planning sessions on financial and cost analysis matters.		
10. Maintain daily contact with agency(s) administrative headquarters on finance matters.		
11. Ensure that all personnel time records transmitted to home agencies according to policy.		
12. Participate in all demobilizing planning.		
13. Ensure that all obligation documents initiated at the incident are properly prepared and completed.		
14. Brief agency administration personnel on all incident related business management issues needing attention and follow-up to leaving incident.		

The Time Unit Leader is responsible for equipment and personnel time recording.

Time Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtaining briefing from Finance/Administration Section Chief.		
4. Determine resource needs.		
5. Establish contact with appropriate agency personnel/representatives.		
6. Organize and establish Time Unit.		
7. Establish Time Unit objectives.		
8. Ensure that daily personnel time recording documents are prepared in compliance with time policies.		
9. Establish commissary operation as required.		
10. Submit cost estimate data forms to Cost Unit as required.		
11. Provide for records security.		
12. Ensure that all records are current or complete prior to demobilization.		
13. Release time reports for assisting agencies to the respective Agency Representatives prior to demobilization.		
14. Brief Finance/Administration Section Chief on current problems, recommendations, outstanding issues, and follow-up requirements.		
15. Maintain Unit/Activity Log.		

The Procurement Unit Leader is responsible for administering all financial matters pertaining to vendor contracts.

Procurement Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing from Finance/Administration Section Chief.		
4. Contact appropriate unit leaders on incident needs and any special procedures.		
5. Coordinate with local jurisdictions on plans and supply sources.		
6. Obtain Incident Procurement Plan.		
7. Prepare and sign contracts and land use agreements as needed.		
8. Draft memorandums of understanding.		
9. Establish contracts with supply vendors as required.		
10. Interpret contracts/agreements and resolve claims or disputes within delegated authority.		
11. Coordinate with Compensation/Claims Unit on procedures for handling claims.		
12. Finalize all agreements and contracts.		
13. Coordinate use of imprest funds as required.		
14. Complete final processing and send documents for payment.		
15. Coordinate cost data in contracts with Cost Unit Leader.		
16. Maintain Unit/Activity Log.		

The Compensation/Claims Unit Leader is responsible for the overall management and direction of all Compensation for Injury Specialist and Claims Specialists assigned to the incident.

Compensation/Claims Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtain briefing from Finance/Administration Section Chief.		
4. Establish contact with incident Safety Officer and Liaison Officer or Agency Representatives if no Liaison Officer is assigned.		
5. Determine the need for Compensation for Injury and Claims Specialists and other personnel if needed.		
6. Establish Compensation for injury work area with the Medical Unit whenever feasible.		
7. Review Incident Medical Plan.		
8. Ensure that Compensation/Claims Specialists have adequate work space and supplies.		
9. Brief Compensation/Claims Specialists on incident activity.		
10. Coordinate with Procurement Unit on procedures for handling claims.		
11. Periodically review all logs and forms produced by Compensation/Claims Specialists to ensure: Work is complete. Entries are accurate and timely. Work is in compliance with Agency requirements and policies.		
12. Keep Finance/Administration Section Chief briefed on unit status and activity.		
13. Ensure that all Compensation for Injury and Claims Logs and Forms are up to date and routed to the proper agency for post-incident processing prior to demobilization.		
14. Demobilize Unit in accordance with Demobilization Plan.		
15. Maintain Unit/Activity Log.		

The Cost Unit Leader is responsible for collecting all cost data, performing cost effectiveness analyses, and providing cost estimates and cost saving recommendations for the incident.

Cost Unit Leader	Initials	Date & Time
1. Review Common Responsibilities.		
2. Review Unit Leader Responsibilities.		
3. Obtaining briefing from Finance/Administration Section Chief.		
4. Coordinate with agency headquarters on cost reporting procedures.		
5. Obtain and record all cost data.		
6. Prepare incident cost summaries.		
7. Prepare resources-use cost estimates for Planning.		
8. Make recommendations for cost savings to Finance/Administration Section Chief.		
9. Maintain cumulative incident cost records.		
10. Ensure that all cost documents are accurately prepared.		
11. Complete all records prior to demobilization.		
12. Provide reports to Finance/Administration Section Chief.		
13. Maintain Unit/Activity Log.		

SECTION 5
INCIDENT PLANNING

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5.1 DOCUMENTATION PROCEDURES

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

Documentation shall begin immediately upon spill notification and continue until termination of all operations. Documentation should include forms, checklists, and planning tools within Olympic Pipe Line Company's Spill Response Plan and Field Document and the Northwest Area Contingency Plan (NWACP) as well as any other documentation that is prepared for the incident not included in the list above.

5.2 ICS FORMS

Olympic Pipe Line Company will use the planning process consistent with the NWACP. Hard copies of Incident Command System (ICS) forms can be found in each area: Bayview Products Terminal, Renton Station, and Castle Rock Station. Electronic forms can be found at the following website: United States Coast Guard Forms (USCG) - http://www.uscg.mil/forms/ics.asp?files=0.

Please note that FEMA ICS forms in the FEMA ICS Forms Booklet (http://www.fema.gov/pdf/emergency/nims/ics_forms_2010.pdf) will eventually be adopted by the USCG since they are the national standard.

5.3 SITE HEALTH AND SAFETY PLAN

INCIDENT SAFETY PLAN

Incident Name:_____ Number:_____

Incident Location:_____

Plan Drafted By:_____ Position:_____

Plan Reviewed By:_____ Position:_____

Approved by Incident Commander: ☐ Yes ☐ No

Incident Commander's Signature:_____ Date/Time:_____

THIS PLAN IS APPLICABLE TO:

☐ Command Post ☐ Staging Areas ☐ Worksites
☐ Vessels/Docks ☐ Aircraft/Landing Areas ☐ _____

RESPONDING AGENCIES:

Agency:	Name:
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

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

Weather

- ☐ Air Temperature _____°F (low) _____°F (high)
- ☐ Water Temperature _____°F
- ☐ Wind Speed/Direction _____
- ☐ Precipitation _____
- ☐ Current Speed/Direction _____
- ☐ Sea Heights/Direction _____

Site Hazards

- ☐ Chemical hazards
- ☐ Slips, trips, falls
- ☐ Heat Stress
- ☐ Cold Stress
- ☐ Weather
- ☐ Drowning
- ☐ Heavy equipment
- ☐ Drum handling
- ☐ Wildlife/plants
- ☐ Hand/power tools
- ☐ Lifting
- ☐ Boats
- ☐ Helicopters
- ☐ Noise
- ☐ Pumps, hoses
- ☐ Steam, hot water
- ☐ Fire/Explosion
- ☐ Poor visibility
- ☐ Motor vehicles
- ☐ Confined spaces (see Attachment/Appendix)
- ☐ Ionizing radiation
- ☐ Other_____

CONTROL MEASURES:

Engineering Controls

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

WORK PLAN: (Buddy System must be used.)

- ☐ Excavation
- ☐ Shoring
- ☐ Appropriate permits issued
- ☐ Other (describe):_____

SPECIALIZED TASK ASSIGNMENTS:

_____

_____

_____

_____

_____

LEVELS OF PROTECTION SELECTED:

☐ Level D ☐ Level C ☐ Level B ☐ Level A

- Respirator: ☐ None ☐ Air Purifying ☐ Supplied Air ☐ EEBA
Describe: _____

- Suit: ☐ Coveralls ☐ Splash Protection ☐ Fully Encapsulating
Describe: _____

- Gloves: ☐ Work ☐ Inner ☐ Outer ☐ Specialty
Describe: _____

- Boots: ☐ Work ☐ Oil/Hazmat ☐ Waders ☐ Specialty
Describe: _____

- Hardhats ☐
- Hearing Protection ☐ Describe _____
- Eye Protection ☐ Describe _____
- Face Shields ☐
- Other ☐ Describe _____

TRAINING: (HAZWOPER-Training Program)

Verified site workers trained per OSHA 1910.120.

Description of Task	Level of Protection (circle appropriate level)			
Initial Site Survey	A	B	C	D
Entry Team	A	B	C	D
Backup Team	A	B	C	D
Decontamination Team	A	B	C	D

Decontamination

☐ Stations established (See Attachment ____, Site Map)

Sanitation

☐ Facilities provided per OSHA 1910.120(n)

Illumination

☐ Facility provided per OSHA 1910.120(m)

Medical Surveillance

☐ Will be provided per OSHA 1910.120(f)

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.

3. As a minimum, Decontamination Team Members must be 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. All breathing air, if used, shall be certified as Grade D or better.

6. Where practical all tools shall be of the non-sparking type.

7. Fire fighting equipment shall be on hand when the situation warrants such support. At a minimum, fire extinguishers shall be available on-scene.

8. Since incident evacuation may be necessary if an explosion, fire or other release occurs, an individual shall be assigned to sound an alert and notify the responsible command personnel and public officials, if required. The evacuation signal shall be _____ until all personnel are known to be evacuated.

9. An adequately stocked EMS Unit shall be on site at all times.

10. The location & 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 will be conducted with all personnel present. Personnel will sign a log sheet, attesting to being present at the pre-Incident briefing. Topics discussed should include known and unknown hazards and the goals and objectives of the operation.

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 the following:

1. Indications of emissions from the incident such as CGI readings of 10% or greater, less than 19.5% oxygen or of 1 Mr/Hr of ionizing radiation is present.

2. Current or projected meteorological data indicates that a probable impact on working conditions could occur.

3. 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.

4. If any of these conditions exist, on-site 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, since 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 and 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.

Sheltering/Evacuation Plan:

_____

_____

_____

_____

Ordered By:_____

EMERGENCY PROCEDURES

In the event of fire or explosion:

_____

_____

_____

_____

In the event of on-site medical emergency:

_____

_____

_____

_____

In the event of additional on-site spill or material release:

_____
_____
_____
_____

EMERGENCY SERVICES:

Emergency Medical Facility:

_____

Ambulance Service:

_____

HAZARD ASSESSMENT:

Attach Hazardous Materials Safety Data Sheets (or other reference materials) for materials 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.

EXCLUSION ZONE_____
_____

CONTAMINATION REDUCTION ZONE_____
_____

SUPPORT ZONE_____
_____

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, and other equipment.)

_____

_____

_____

_____

DECONTAMINATION SOLUTIONS USED:

_____

_____

DISPOSAL PROCEDURES:

_____

_____

Authorized By: _____

EQUIPMENT DECONTAMINATION:

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

Specify:_____

_____

_____

_____

DATE PREPARED:_____PREPARED BY:_____

Reviewed By:_____

Assistance in preparing this Safety Plan can be obtained from Haz Mat personnel.

ATTACHMENT (___): HAZARDOUS SUBSTANCE INFORMATION SHEETS MSDS/SLID/RIDS/CHRIS/CHEMTOX/TOMES/etc. **PAGE 1 of 1**

SPILL/LEAK INFORMATION DATA SHEET (SLID)
ALL PRODUCTS (Except Benzene Line)

Physical Hazard Potential:
- Flammable &/or Combustible
- Potential of IDLH conditions

Health Hazard:
- Inhalation of Benzene, Toluene, Xylene, Gasoline Vapors
- Skin penetration by Benzene
- Contact Dermatitis

Symptoms of Overexposure:
Excessive exposure to vapors may produce headaches, dizziness, nausea, drowsiness, irritation of eyes, nose and throat and central nervous system depression.

Respiratory Equipment Requirement:
Half Mask Air Purifying Respirator with Organic Cartridges shall be worn until notified by the Site Manager that respiratory protection is no longer necessary. If monitoring equipment alarms, evacuate and refer to (e) and (f) of the Site Entry Procedures in the BE pipelines (NA) Business Unit Contingency Plan (See "Site Entry Procedures: All Products (Except Benzene)" on page 6.9.1-4).

Personal Protection Equipment (PPE):
Type of Gloves: Neoprene Rubber
Type of Boots: Rubber
Type of Body Suit: Rain Suit or Polycoated Tyvek if product is spraying out of the line.

Monitoring Equipment Levels:
Combustible Gas/Oxygen monitor:

<u>Hazardous IDLH</u>
LEL: 10-19% - Evacuate, then evaluate PPE, ventilation and safety for re-entry
Greater or equal to 20% - evacuate, do not enter
0_2: < 19.5% Evacuate or use SCBA
> 23.5% Evacuate, evaluate mitigation options

Benzene Pump Detector Tube:
- Greater than 1 ppm, Don Half Mask Air Purifying Respirator
- Greater than 10 ppm, Don SCBA

Note: The Spill/Leak Information Data Sheet (SLID) is not meant to replace the appropriate Material Safety Data Sheet (MSDS). Always consult the MSDS when other specific questions arise.

ATTACHMENT (___): HAZARD INFO FOR OILS CONTAINING BENZENE, TOLUENE, XYLENE, HEXANE, NAPTHALENE AND/OR NAPTHA **PAGE 1 of 3**

Oils and products that contain benzene include: crude oils, gasoline, military JP4, commercial JET B, aviation gasoline, gas oils and feed stocks.

- These oils/products are composed of an indefinite petroleum distillate mixture. They may contain n-hexane, benzene, toluene, xylene, naphthalene and PolyAromatic Hydrocarbons (PAHs) in concentrations that may vary widely depending on the source of the oil, weathering and aging.

- HAZARD DESCRIPTION: These oils/products may cause dermatitis by skin contact; nausea by inhalation; and eye irritation. Benzene is a hematologic toxin (it affects the blood and blood forming organs), and is a carcinogen. The most important potential benzene, toluene, or xylene hazard is in poorly ventilated areas (such as pits or under docks), or around fresh spills. Benzo(a)pyrene is a skin contact hazard that may cause skin cancer. As oil weathers and ages, benzo(a)pyrene becomes more concentrated because it evaporates more slowly than other chemicals in the mixture.

- BASIC PRECAUTIONS: Stay away from, or upwind of, fresh spills; wear chemical resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing; immediately change clothing that is showing evidence of product penetration or is torn; and wash skin with soap and water before changing into street clothing, before eating/drinking, or before exiting a contamination reduction zone. Flush eyes with water if oil gets in them. If ingested do not induce vomiting, contact a physician. Urine phenol should be tested as soon as possible (and not later than 72 hours after exposure) if there is a suspected exposure to benzene.

- MONITORING/EVALUATION INFORMATION FOR CERTAIN ASSOCIATED VAPOR HAZARDS (Taken from NIOSH Pocket Guide to Chemical Hazards--1990 DHHS-NIOSH Pub. No. 90-117). The following information is provided for some of the more significant components of crude oil and high vapor pressure petroleum products that produce some degree of vapor hazard. Most of these chemicals are found in small quantities in crude oil and evaporate quickly so that their hazard is most significant during the first hours/days of a spill and diminish rapidly with weathering.

ATTACHMENT (___): HAZARD INFO FOR OILS CONTAINING BENZENE, TOLUENE, XYLENE, HEXANE, NAPTHALENE AND/OR NAPTHA **PAGE 2 of 3**

BENZENE		Health Effects/Symptoms
CAS:	71-43-2	Irritant, hematologic toxin, CNS toxin and carcinogen. Irritation of eyes, nose and respiratory system; giddiness; headache; nausea; staggered gait; fatigue; anorexia; dermatitis; and depression of the bone marrow.
PEL (8 hr):	1 ppm (OSHA)	
STEL (15 min):	5 ppm (OSHA)	
IDLH:	3000 ppm	
Vapor Pressure:	75 mmHg	
Flash Point:	12 deg F.	
LEL/UEL:	1.3% -- 7.9%	
Ionization Potential:	9.24 eV	

TOLUENE		Health Effects/Symptoms
CAS:	108-88-3	CNS/liver/kidney/skin toxin. Fatigue; weakness; confusion euphoria; dizziness; headache; dilated pupils; lacrimation (watery eyes); nervousness; muscular fatigue; insomnia; paresthesia (burning, tingling, or numbness); and dermatitis.
PEL (8 hr):	100 ppm (OSHA)	
STEL (15 min):	150 ppm (OSHA)	
IDLH:	2000 ppm	
Vapor Pressure:	20 mmHg	
Flash Point:	40 deg F.	
LEL/UEL:	1.2% -- 7.1%	
Ionization Potential:	8.82 eV	

XYLENE (o-, m-, p- isomers)		Health Effects/Symptoms
CAS:	1330-20-7	CNS/GI tract/liver/kidney/blood/skin/ eye toxin. Dizziness; excitement; drowsiness; in-coordination; staggering gait; irritation of the eyes, nose and throat; corneal vacuolization (formation of small spaces in the cornea); anorexia; nausea; abdominal pain; and dermatitis.
PEL (8 hr):	100 ppm (OSHA)	
STEL (15 min):	150 ppm (OSHA)	
IDLH:	1000 ppm	
Vapor Pressure:	7/9 mmHg (varies with isomer)	
Flash Point:	63/84 deg F.	
LEL/UEL:	1.0% -- 7.0%	
Ionization Potential:	8.44 or 8.8.56 eV	

n-HEXANE (HEXANE or NORMAL HEXANE)		Health Effects/Symptoms
CAS:	110-54-3	Skin/eye/respiratory system toxin. Light headedness; nausea; headache; numbness of the extremities; muscular weakness; irritation of the eyes and nose; chemical pneumonia; giddiness and dermatitis.
PEL (8 hr):	50 ppm (OSHA)	
IDLH:	5000 ppm	
Vapor Pressure:	150 mmHg	
Flash Point:	-7 deg F.	
LEL/UEL:	1.1% -- 7.5%	
Ionization Potential:	10.18 eV	

ATTACHMENT (___): HAZARD INFO FOR OILS CONTAINING BENZENE, TOLUENE, XYLENE, HEXANE, NAPTHALENE AND/OR NAPTHA **PAGE 3 of 3**

NAPHTHALENE (WHITE TAR)		Health Effects/Symptoms
CAS:	91-20-3	CNS/GI tract/liver/kidney/blood/skin/ eye toxin. Dizziness; excitement; drowsiness; lack of coordination; staggering gait; irritation of the eyes, nose and throat; corneal vacuolization (formation of small spaces in the cornea); anorexia; nausea; abdominal pain; and dermatitis.
PEL (8 hr):	10 ppm (OSHA)	
STEL (15 min):	15 ppm (OSHA)	
IDLH:	500 ppm	
Vapor Pressure:	0.08 mmHg	
Flash Point:	174 deg F.	
LEL/UEL:	0.9% -- 5.9%	
Ionization Potential:	7.30 eV	

PETROLEUM DISTILLATE (NAPHTHA)		Health Effects/Symptoms
CAS:	8002-05-9	Irritant, CNS/respiratory toxin. Irritation of eyes, nose and throat; dizziness; drowsiness; headache; nausea; dermatitis.
PEL (8 hr):	1600 MG/M3 (OSHA)	
REL (8 hr):	350 MG/M3 (NIOSH)	
IDLH:	10,000 ppm	
Vapor Pressure:	40 mmHg (varies with mixture)	
Flash Point:	-40 to -86 deg F.	
LEL/UEL:	1.1% -- 5.9%	
Ionization Potential:	varies	

ATTACHMENT (___): HAZARD INFO FOR OILS (WITHOUT BENZENE)

Some oils that generally do not contain benzene (except as a minor constituent or contaminant), include: kerosenes, diesels, military JP5, commercial JET A, bunker C, & fuel oils (1 thru 6).

- These oils are composed of an indefinite petroleum distillate content typically including Poly Aromatic Hydrocarbons (PAHs). The concentration of these products will vary widely depending on the source of the oil, weathering, and aging.

- HAZARD DESCRIPTION: May cause dermatitis by skin contact; nausea by inhalation; and eye irritation by contact. Benzo(a)pyrene is a skin contact hazard and potentially may cause skin cancer.

- BASIC PRECAUTIONS: Wear chemical resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing; immediately change clothing that is showing evidence of product penetration or is torn; and wash skin with soap and water before changing into street clothing, before eating/drinking, or before exiting a contamination reduction zone. Flush eyes with water if oil gets in them. If ingested do not induce vomiting—contact a physician.

ATTACHMENT (___): HEAT STRESS CONSIDERATIONS
(taken from NIOSH 86-112) **Page 1 of 5**

- **HEAT STRESS CONSIDERATIONS:** The Site Safety Officer or Site Safety Supervisor for the entire response should make heat stress determinations throughout the day. If it is determined that a heat stress hazard exists, an alert should be passed to all teams to implement mandatory rest periods. The Site Safety Officer/Supervisor should generally be guided by the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines in determining work/rest periods. Fluids should be available at all times and encouraged during mandatory rest periods.

- **SAFETY CONCERNS:** Certain safety problems are common to hot environments. The frequency of accidents, in general, appears to be higher in hot environments than in more moderate environmental conditions. One reason is that working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes causes workers to overlook safety procedures or to divert attention from hazardous tasks.

- **HEALTH CONCERNS:** Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders.

  - **Heat Stroke:**

    - Signs and Symptoms: Heat stroke is the most serious of health problems associated with working in hot environments. It occurs when the body's temperature regulatory system fails and sweating becomes inadequate. The body's only effective means of removing excess heat is compromised with little warning to the victim that a crisis stage has been reached.

      - A heat stroke victim's skin is hot, usually dry, red or spotted

      - Body temperature is usually 105 degrees F or higher

      - The victim is mentally confused, delirious, perhaps in convulsions, or unconscious

    - Medical Attention: Unless the heat stroke victim receives quick and appropriate treatment, death can occur.

    Any person with signs or symptoms of heat stroke requires immediate hospitalization.

SEND SOMEONE TO GET MEDICAL ASSISTANCE/EMT IMMEDIATELY!!!

While waiting for medical assistance first aid should be immediately administered. This includes:

- Removing the victim to a cool area
- Thoroughly soaking the clothing with water
- Vigorously fanning the body to increase cooling

- **HEAT EXHAUSTION:** Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt.

  - Signs and Symptoms: A worker suffering from heat exhaustion:
    - Still sweats; but
    - Experiences extreme weakness or fatigue, giddiness, nausea, or headache

    In more serious cases:

    - The victim may vomit or lose consciousness
    - The skin is clammy and moist
    - The complexion is pale or flushed
    - The body temperature is normal or only slightly elevated
  - Medical Attention. General treatment:
    - Notify the site EMT
    - Have the victim rest in a cool place
    - Have the victim drink plenty of liquids

  Victims with mild cases of heat exhaustion usually recover spontaneously with this treatment. Those with severe cases may require extended care for several days. There are no known permanent effects.

CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A “LOW SODIUM” DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.

ATTACHMENT (___): HEAT STRESS CONSIDERATIONS

- **Heat Cramps:**
  - Signs and Symptoms: Heat cramps are painful spasms of the muscles that occur among those who sweat profusely in heat, drink large quantities of water, but do not adequately replace the body's salt loss.
  - Medical Attention: Cramps may occur during or after work hours and may be relieved by taking salted liquids by mouth.

CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A "LOW SODIUM" DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.

- **Fainting:** A worker who is not accustomed to hot environments and who stands erect and immobile in the heat may faint.
  - Signs and Symptoms: With enlarged blood vessels in the skin and in the lower part of the body due to the body's attempts to control internal temperature, blood may pool there rather than return to the heart to be pumped to the brain.
  - Medical Attention: Upon lying down, the worker should soon recover. By moving around, and thereby preventing blood from pooling, the patient can prevent further fainting.
- **Heat Rash:** Heat rash, also known as prickly heat, is likely to occur in hot, humid environments where heat is not easily removed from the surface of the skin by evaporation and the skin remains wet most of the time.
  - Signs and Symptoms: The sweat ducts become plugged, and a skin rash soon appears. When the rash is extensive or when it is complicated by infection, prickly heat can be very uncomfortable and may reduce a worker's performance.
  - Medical Attention: Workers can prevent this by resting in a cool place part of each day and by regularly bathing and drying the skin.
- **Transient Heat Fatigue:** Transient heat fatigue refers to the temporary state of discomfort and mental or psychological strain arising from prolonged heat exposure. Workers unaccustomed to the heat are particularly susceptible and can suffer, to varying degrees, a decline in task performance, coordination, alertness and vigilance.

ATTACHMENT (___): HEAT STRESS CONSIDERATIONS

- **PREPARING FOR WORK IN THE HEAT:** One of the best ways to reduce the heat stress of workers is to minimize heat in the workplace. However, at oil spills heat is difficult to control, while working outdoors and exposed to various weather conditions.

  Humans are, to a large extent, capable of adjusting to the heat. This adjustment to heat, under normal circumstances, usually takes about 5 to 7 days, during which time the body will undergo a series of changes that will make continued exposure to heat more endurable.

  Workers who return to work after vacation or extended illness may be affected by the heat in the work environment. Whenever such circumstances occur, the worker should be gradually reacclimatized to the hot environment.

- **MECHANIZATION:** Heat stress depends, in part, on the amount of heat the worker's body produces while a job is being performed. The amount of heat produced during hard, steady work is much higher than that produced during intermittent or light work. Therefore, one way of reducing the potential for heat stress is to make the job easier or lessen its duration by providing adequate rest time. Mechanization of work procedures can often make it possible to isolate workers from the heat source and increase overall productivity by decreasing the time needed for rest.

- **WORK/REST PERIODS:** Rather than be exposed to heat for extended periods of time during the course of a job, workers should, wherever possible, be permitted to distribute the workload evenly over the day and incorporate work-rest cycles or regular (and enforced) breaks. Work-rest cycles give the body an opportunity to get rid of excess heat, slow down the production of internal body heat, and provide greater blood flow to the skin.

  Providing cool rest areas in hot work environments considerably reduces the stress of working in those environments. Rest areas should be as close to the work area as possible, and provide shade. Shorter but frequent work-rest cycles are the greatest benefit to the worker.

- **DRINKING FLUIDS:** In the course of a day's work in the heat, a worker may produce as much as 2 to 3 gallons of sweat. Because so many heat disorders involve excessive dehydration of the body, it is essential that water intake during the workday be about equal to the amount of sweat produced.

  Most workers exposed to hot conditions drink less fluid than needed because of an insufficient thirst drive. A worker, therefore, should not depend on thirst to signal when and how much to drink.

5 to 7 ounces of fluids should be consumed every 15 to 20 minutes to replenish the necessary fluids in the body.

There is no optimum temperature of drinking water, but most people tend not to drink warm or very cold fluids as readily as they will cool ones.

Heat acclimatized workers lose much less salt in their sweat than do workers who are not adjusted to the heat. The average American diet contains sufficient salt for acclimatized workers even when sweat production is high. If for some reason, salt replacement is required, the best way to compensate for the loss is to add a little extra salt to the food.

Salt tablets SHOULD NOT be used.

CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A "LOW SODIUM" DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.

- **PROTECTIVE CLOTHING AND HEAT STRESS:** Clothing inhibits the transfer of heat between the body and the surrounding environment. Therefore, in hot jobs where the air temperature is lower than skin temperature, wearing clothing reduces the body's ability to lose heat into the air. When air temperature is higher than skin temperature, clothing helps to prevent the transfer of heat from the air to the body. The advantage of wearing additional clothes, however, may be nullified if the chemical protective clothes interfere with the evaporation of sweat.

ATTACHMENT (___): COLD STRESS & HYPOTHERMIA

Frostbite and hypothermia are major hazards of working in cold temperatures. A cold environment can reduce the temperature of the body and cause shivering, reduced mental alertness, and even loss of consciousness. However, a healthy worker who is properly protected and takes reasonable precautions can function efficiently and safely in cold environments.

- **FACTORS AFFECTING COLD EXPOSURES**

  - Important Factors Contributing to Cold Injury:

    - Exposure to humidity and high winds, contact with moisture or metal, inadequate clothing, age and general health.

    Physical conditions that worsen the effects include:

    - Fatigue, allergies, vascular disease, smoking drinking and certain specific drugs or medicines.

  - Important Warnings:

    - Pain in the extremities may be the first warning of dangerous exposure to cold.

    - Severe shivering must be taken as a sign of danger requiring removal from the cold exposure.

    - A worker should go immediately to a warming shelter if any of the following symptoms occur:

      - Pain in the extremities (or frostnip), onset of heavy shivering, excessive fatigue, drowsiness

      - Euphoria

    A litter should be used if possible for all but the mildest cases.

    - Hypothermia/Cold Stress victims must be re-warmed, but must not be re-warmed too fast. In particular, victims should not be re-warmed by submersion in water at any temperature.

ATTACHMENT (___): COLD STRESS & HYPOTHERMIA

- **HYPOTHERMIA**: Hypothermia is an abnormally low body temperature caused by exposure to cold in air or in water. Hypothermia results as the body looses heat faster than it can produce it. Air temperature alone is not enough to judge the cold hazard of a particular environment. Hypothermia cases often develop in air temperatures between 30-50 degrees Fahrenheit. When you figure in such factors as wind chill, the effective temperature can be significantly lower.
  - Early Warnings of Hypothermia Are:
    - Uncontrollable shivering and the sensation of cold.
    - The heartbeat slows and sometimes becomes irregular, the pulse weakens, and the blood pressure changes.
    - Fits of shivering, vague or slurred speech, memory lapses, incoherence, or drowsiness are some symptoms which may occur.
    - Other symptoms which may be seen before unconsciousness are cool skin, slow, irregular breathing, low blood pressure, apparent exhaustion, and inability to get up after a rest.
  - First Aid for Hypothermia: The main objective in handling potential cases of hypothermia is re-warming the body core evenly and without delay. However, doing it too rapidly can disrupt body functions such as circulation.
    - The outer layer of clothing should be removed when entering a warm shelter.
    - The remaining clothing should be loosened to permit sweat to evaporate.
    - Alcohol should not be consumed while in the warm environment.
    - Anyone on medications such as blood pressure control or water pills should consult a physician about possible side effects of cold stress.
    - If medical help is not immediately available:
      - Keep the person quiet, but keep them awake, if possible.
      - Avoid unnecessary movement. If it's necessary to move a hypothermia victim, use a litter the exertion of walking could aggravate circulation problems.

- In a case of mild hypothermia where the person is conscious, the body may be packed with heat packs or warm towels at the neck, groin and armpits.
- As the extremities begin to recover warmth give conscious victims sweet, warm drinks. Avoid caffeine or alcoholic drinks.
- Don't re-warm the core and the extremities at the same time. The sudden return of the cool blood pooled in the extremities to the heart can cause shock.

- Water Immersion Victims: Flotation is the most important factor in water immersion survival, but may not be available if not provided in advance (see protective clothing notes below).
  - It is especially important to keep your head dry.
  - Avoid thrashing about and assume the HELP position (Heat Escape Lessening Posture) by crossing your wrists over your chest and drawing your knees close to your chest to avoid losing excess body heat. By using the HELP position, the head, neck, armpit and groin areas are protected which are all high heat loss areas.
  - If others are in the water with you, huddle together to reduce heat loss, aid in rescue, and boost morale.

- **OTHER COLD STRESS INJURIES:**
  - Frostbite
    - Symptoms:
      - Whitened areas on skin
      - Burning sensation at first
      - Blistering
      - Affected part cold, numb and tingling

- Treatment:
    - Cover the frozen part
    - Provide extra clothing and blankets
    - Bring person indoors
    - Place the part in warm water or rewarm with warm packs
    - If no water is available, wrap gently in a sheet and blanket or place frostbitten fingers under armpits
    - Discontinue warming when the affected part becomes flushed and swollen
    - Exercise part after rewarming but do not allow the person to walk after the affected part thaws
    - Give sweet warm fluids to conscious person
    - If feet are affected, put on dry socks over footwear
    - If cheeks are affected, cover cheeks with warm hands
    - Do not rub the part with anything
    - Do not use heat lamp, hot water bottles, place part near stove or break blisters
    - Obtain medical assistance ASAP

- Chilblain
    - Symptoms:
        - Recurrent localized itching, swelling and painful inflammation of the fingers, toes, or ears
        - Severe spasms
    - Treatment:
        - Remove to warmer area
        - Consult physician

- Frostnip
  - Symptoms: Skin turns white
  - Treatment:
    - Remove to warmer area
    - Refer to treatment for frostbite
- Acrocyanosis
  - Symptoms: Hands and feet are cold, blue and sweaty
  - Treatment:
    - Remove to warmer area
    - Loosen tight clothing
    - Consult physician
- Trench Foot
  - Symptoms:
    - Edema (swelling) of the foot
    - Tingling, itching
    - Severe pain
    - Blistering
  - Treatment:
    - Remove to warmer area
    - Refer to frostbite treatment
    - Consult physician
- Raynaud's Disease
  - Symptoms:
    - Fingers turn white and stiff
    - Intermittent blanching and reddening of the fingers and toes
    - Affected area tingles and becomes very red or reddish purple

- Treatment:
  - Remove to warmer area
  - Consult physician

- **PREVENTING COLD STRESS**
  - Reduce manual work loads
  - Prevent dehydration
  - Provide warm locations for breaks
  - Provide wind breaks & shelters
  - Schedule coldest work for the warmest part of the day
  - Move work to warmer areas whenever possible
  - Assign extra workers to highly demanding tasks
  - Relief workers available for workers needing a break
  - Enforce the Buddy System
  - Minimize sitting/standing still for long periods
  - Older workers need to be extra careful in the cold
  - Sufficient sleep and good nutrition are important for maintaining a high level of tolerance to cold
  - Provide appropriate protective clothing/equipment
    - Priority clothing includes protection of FEET, HANDS, HEAD and FACE. Keeping the head covered is important because as much as 40% of body heat can be lost when the head is exposed.

ATTACHMENT (___): COLD STRESS & HYPOTHERMIA

- Ensembles for Work When Water Immersion May Occur:
  - Flotation (personal or throwable devices).
  - Air trapped between layers of clothing will provide buoyancy and heat insulation, but Personal Flotation Devices (PFDs) offer the best chance for survival in cold water. Type III PFDs include float coats and mustang suits which provide floatation and thermal protection.
  - Preposition throwable floatation devices in boats or work areas near water.

ATTACHMENT (___): SANITATION REQUIREMENTS

- **POTABLE WATER:** An adequate supply of potable water, or other drinking fluids, shall be maintained at all times throughout the site. Containers for drinking fluids shall be capable of being tightly closed, and equipped with a tap. These containers must also be labeled in such a manner that the contents are not accidentally used for other purposes. Where single service cups are supplied, the unused cups shall be maintained in sanitary containers; and a separate disposal container provided for used cups.

- **NON-POTABLE WATER:** Water intended for uses other than drinking or washing shall be identified in a way that it is not accidentally used for drinking, washing, or cooking. There shall be no cross-connection of potable and non-potable water supplies.

- **TOILET FACILITIES:** Toilet facilities shall be provided at a minimum in accordance with Table H-120.2 (Toilet Facilities) of 29 CFR 1910.120(n).

20 or fewer people	1 facility
20-200 people	1 toilet seat and 1 urinal per 40 persons
more than 200 people	1 toilet seat and 1 urinal per 50 persons

  - Toilets shall be provided such that they are readily accessible from all work areas. Mobile crews with ready access to toilet facilities using their own transportation, do not need to have toilet facilities located at their temporary work sites.

  - Sewage shall be handled in accordance with local health codes using one of the following means:

    - Sanitary sewer
    - Chemical toilets
    - Recirculating toilets
    - Combustion toilets, or flush toilets

- **FOOD HANDLING:** Shall be conducted in accordance with the requirements of local jurisdiction.

- **WASHING FACILITIES:** Washing facilities shall be readily accessible by all employees. In addition to sanitary cleaning, these facilities shall be so equipped that they can be used to remove oily residues from the skin. Washing facilities shall be maintained free of contaminants above exposure limits, and as free as practical from oily residues.

- **SHOWERS:** For operations lasting more than 6 months, showers and changing rooms must be provided in accordance with 29 CFR 1910.120(n)(7); and 29 CFR 1910.141(d)(3) and 1910.141(e).

ATTACHMENT (___): CONFINED SPACE ENTRY CHECKLIST

These are strictly guidelines for use by field personnel based on NIOSH pub 87-113 "A Guide to Safety in Confined Spaces"; and NFPA-306 Control of Gas Hazards on Vessels.

Oxygen must be greater than 19.5% and less than 21.0% (There should be no unexplained deflection from the calibrated setting for ambient air—typically 20.9%--outside of normal instrument variability.)? Atmospheres less than 19.5% should be treated as an IDLH atmosphere for purposes of respiratory protection selection. Atmospheres greater than 21% should be treated as a flammable atmosphere hazard (enhances flammability of other materials).

Combustible atmospheres—where flammable/combustible gases and vapors may be present—must be less than 10% of the LEL (Lower Explosive Limit) (There should be no unexplained deflection from the calibrated zero setting without assessment of potential toxic hazards associated with the atmosphere).

Toxic hazards (per NFPA 306 concentrations should not exceed TWA exposure limits such as OSHA PEL, ACGIH TLV, or NIOSH REL). If exposure limits are exceeded, consider additional engineering controls such a ventilation or cleaning. If other controls are not effective/feasible, appropriate respiratory protection should be used above exposure limits.

IS ENTRY NECESSARY? YES / NO

PRELIMINARY MONITORING			
O_2	LEL	Toxicity	Radiation

ATTACHMENT (___): CONFINED SPACE ENTRY CHECKLIST

MONITORING: When considering monitoring requirements, personnel should consider such things as the potential for sudden changes in atmospheric conditions (e.g., gas sources in or adjacent to the confined space); and environmental or work activities which may change conditions over time (e.g., hot sunny weather increases vapor generation; welding/cutting/painting/curing consume oxygen; and internal combustion engines consume oxygen and produce oxygen displacing gases).

Appropriate monitoring is established as follows:

___LEL:
- ___continuous,
- ___as directed by safety supervisor,
- ___daily or when safety supervisor changes watch,
- ___every ___ hour(s)

___OXYGEN:
- ___continuous,
- ___as directed by safety supervisor,
- ___daily or when safety supervisor changes watch,
- ___every ___ hour(s)

___OTHER

HAZARD: _____

MONITORING EQUIPMENT: _____
- ___continuous,
- ___as directed by safety supervisor,
- ___daily or when safety supervisor changes watch,
- ___every ___ hour(s)

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

ATTACHMENT (___): CONFINED SPACE ENTRY CHECKLIST

VENTILATION:

Adequate ventilation has been established as follows:

_____ air changes prior to entry (minutes:_____),

_____ continuous ventilation during entry,

Location/type/ducts (diagram & description):

Source of air being blown into space is free of hazards? YES / NO

Contaminated air is exhausted into a safe location? YES / NO

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

ATTACHMENT (___): CONFINED SPACE ENTRY CHECKLIST

CONFINED SPACE ENTRY PERMIT:

Marine chemist certificate or equivalent issued? YES / NO

Chemist Name: _____ License No.: _____

Date Issued: _____ Period Covered: _____

Emergency phone numbers (see Site Safety Plan—also available on scene).

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

ATTACHMENT (___): CONFINED SPACE ENTRY CHECKLIST

INTIAL TESTING AND PERMIT (see attached checklist pages 1 through 5)

CONFINED / HAZARDOUS SPACE ENTRY AUTHORIZED: YES / NO
HOTWORK AUTHORIZED: YES / NO
LOCATION AND DESCRIPTION OF SPACE:_____
DATE: _____
TIME: _____
PERMIT EXPIRES: _____

ENTRY TEAM SUPERVISOR: (see attached checklist)

SPECIAL REQUIREMENTS MET (see also checklist pages 1 through 5)

LOCK-OUT _____YES / NO / NA
DE-ENERGIZE _____YES / NO / NA
LINES BROKEN, CAPPED/BLANKED _____YES / NO / NA
PURGE, FLUSH & VENT _____YES / NO / NA
VENTILATION _____YES / NO / NA
SECURE AREA _____YES / NO / NA
RESPIRATORY PROTECTION ADEQUATE _____YES / NO / NA
PERSONAL PROTECTIVE EQUIPMENT ADEQUATE _____YES / NO / NA
ESCAPE/RESCUE ADEQUATE _____YES / NO / NA
FIRE SUPPRESSION EQUIPMENT _____YES / NO / NA
LIGHTING _____YES / NO / NA

**********PRE-ENTRY TESTS AND MONITORING FOLLOW UP TESTING**********
******(see also monitoring requirements pages 1 thru 5):*******

MONITORING LOG					
Test	Limits	Preliminary Results	Date/Time	Date/Time	Date/Time
% O_2					
% LEL					
CO					
CO_2					
H_2S					
BNZ					
Other					
Other					
Other					

- O2 = oxygen, LEL = lower explosive limit, CO = carbon monoxide
- CO2 = carbon dioxide, THC = total hydrocarbons
- TAH = total aromatic hydrocarbons, H2S = hydrogen sulfide
- ND = no deflection

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

ATTACHMENT (___): SIMPLIFIED WORK PLAN

This form should be used to quickly document plans during the initial phases of emergency/post-emergency response operations, or as a means to readily modify general plans provided in the Comprehensive Work Plan.

ENTRY OBJECTIVES:

1. _____

_____

2. _____

_____

3. _____

_____

CHEMICAL HAZARD EVALUATION FOR OPERATION:
Latest Monitoring Sheet(s) provided as Attachment: _____.

Hazard (Chemical Name)	Primary Hazard(s) and Special Notes:	Info Sheet Attached:
_____ _____ _____ _____	_____ _____ _____ _____	__Generic info sheet __RIDS, __CHRIS, __TOMES, __CHEMTOX, __MSDS, __Other_____
_____ _____ _____ _____	_____ _____ _____ _____	__Generic info sheet __RIDS, __CHRIS, __TOMES, __CHEMTOX, __MSDS, __Other_____
_____ _____ _____ _____	_____ _____ _____ _____	__Generic info sheet __RIDS, __CHRIS, __TOMES, __CHEMTOX, __MSDS, __Other_____
_____ _____ _____ _____	_____ _____ _____ _____	__Generic info sheet __RIDS, __CHRIS, __TOMES, __CHEMTOX, __MSDS, __Other_____
_____ _____ _____ _____	_____ _____ _____ _____	__Generic info sheet __RIDS, __CHRIS, __TOMES, __CHEMTOX, __MSDS, __Other_____

Decon considerations and special procedures:
__ Decon layout provided as attachment: _____.

ATTACHMENT (___): AIR MONITORING LOG

Site Name: _____ Date: _____

Instrument Calibration Record:

Instrument/Type	Date/Time Calibrated	Person Conducting Calibration	Comments

Location of Reading	Time of Reading	O_2 Reading	LEL Reading	H_2S Reading	CO Reading	Other	Other	Other

ATTACHMENT (___): SAFE WORK PRACTICES FOR HELICOPTERS

- **BASIC SAFE WORK PRACTICES FOR ALL PASSENGERS/GROUND CREWS:**

  - Passengers should receive a safety briefing from helicopter operators including safety features and equipment, their location on the individual aircraft, water landing procedures when appropriate, and emergency information cards before taking off.

  - Passengers or ground crew members approaching helicopters shall stay in a crouched position, and shall be in clear view of the pilot while approaching or departing a helicopter.

  - Passengers and ground crew should approach/depart from the FRONT of the helicopter ONLY when signaled by the pilot; and should NEVER walk under or around the tail.

  - Loose fitting clothing, hats, hard hats, or other gear which might be caught in rotor down wash must be secured or removed within 100 feet of operating helicopters.

  - Passengers shall maintain a distance of 50 feet from helicopters while rotors are turning. Ground crew should also maintain this distance unless specific work practices are developed for closer work.

  - Passengers shall wear seat belts at all times.

  - Passengers and ground crew shall wear hearing protection (including communications headsets or helmets) at all times around operating helicopters.

  - Passengers shall generally assist the pilot in watching for other traffic or ground obstacles as directed by the pilot.

  - During emergency landings in water:

    - Do not exit until rotor blades stop turning or pilot signals all clear

    - Do not inflate life preservers until outside of the helicopter

ATTACHMENT (___): SAFE WORK PRACTICES FOR HELICOPTERS

- **SAFE WORK PRACTICES FOR CARGO HANDLING ARE FOUND IN 29 CFR 1910.183 AND INCLUDE:**

  - Use proper slings and tag lines in accordance with 29 CFR 1910.183(c) and 1910.184.

  - Testing and use of cargo hooks and electrically operated cargo hooks shall be performed in accordance with 29 CFR 1910.183(d) and (i).

  - Static charge on suspended loads shall be dissipated with a grounding device before ground crew touch the suspended load unless protective rubber gloves are being worn.

  - External loads shall not be lifted unless determined to be within the helicopter manufacturer's recommended rating.

  - Communications shall be maintained in accordance with 29 CFR 1910.183.

  - Ground and flight crew members shall be familiar with, and use the manual signaling system described in 29 CFR 1910.183.

ATTACHMENT (___): SAFE WORK PRACTICES FOR SMALL BOATS

Ensure that all boats comply with the appropriate state and federal regulations. In addition to the items discussed below certain types of vessels will require such items as USCG approved fire extinguishers, backfire flame control, powered ventilation, sound signaling devices (different from emergency signals), navigation lights/ signals, pollution placards, and marine sanitation devices.

Boat operators should familiarize themselves, and passengers with safety features and equipment on their boats.

Boats should be operated by qualified individuals.

Life jackets, work vests, mustang suits, or other appropriate Coast Guard approved Personal Flotation Devices (PFDs) should be worn by personnel in small boats.

- Use of mustang suits are particularly critical under conditions of cold stress
- Types of Personal Flotation Devices (PFDs):
    - TYPE I. Off-shore life jacket provides the most buoyancy. It is effective for all waters and intended specifically for open, rough or remote waters where rescue may be delayed.
    - TYPE II. Near-shore buoyancy vests are intended for calm, inland water or where there is a good chance of quick rescue.
    - TYPE III. Flotation aids are good for calm, inland water, or where there is a good chance of quick rescue. Examples: float coats, fishing vests and ski vests.
    - TYPE IV. These are throwable devices, not intended to be worn or to replace those that are worn.
    - TYPE V--SPECIAL USE. These are intended for specific activities (according to the conditions on the labels). Some examples: deck suits, mustang suits, work vests and hybrid PFDs below.
    - TYPE V--HYBRID INFLATABLES. These PFDs contain a small amount of inherent buoyancy and an inflatable chamber. Performance equals that of a Type I, II, or III PFD (as noted on the label) WHEN INFLATED.

ATTACHMENT (___): SAFE WORK PRACTICES FOR SMALL BOATS

Small boats should generally not be operated for oil recovery after sunset. If this is required or poses minimal risk, routes of operations should be carefully prescribed, individual boats should maintain a communication schedule with a shore base; and should be fully equipped with appropriate running lights, emergency signals, and personnel onboard should be wearing emergency night signaling devices.

Distress signals (three or more for day and three or more for night) should be carried onboard all vessels. These devices may be required by regulation. They may be stored onboard or issued to individuals. If stored onboard they should be in a sealed, watertight, orange container marked "DISTRESS SIGNALS".

- USCG approved pyrotechnic visual distress signals include red flares (hand-held or aerial), orange smoke (hand-held or floating) and launchers (for aerial red meteors or parachute flares).

PYROTECHNIC DEVICES SHOULD NOT BE USED NEAR FLAMMABLE PRODUCT SPILLS.

- Non-pyrotechnic distress signals are not approved individually but need to meet certain requirements. They should be in serviceable condition, readily accessible, and certified by the manufacturer as complying with USCG requirements. These devices include orange distress flags and electric distress lights.

- Distress flags are day signals only. They must be at least 3 x 3 feet with a black square and ball on an orange background.

  - Electric distress lights are for night use only. These devices automatically flash the international SOS code (... _ _ _ ...) so a flashlight IS NOT considered a distress signal. Under inland navigation rules a high intensity strobe light is considered a distress signal.

  - It is a violation of regulations to display visual distress signals on the water except when assistance is required.

  Boat operators must keep their supervisors informed of their area of operations, especially when they change their work area (if plans call for a boat to move to another location during a shift, the operator should advise their supervisor of their actual time of departure).

ATTACHMENT (___): SAFE WORK PRACTICES FOR SMALL BOATS

Boat operators should never anchor their boats by the stern. This is typically the lowest point on the boat due to design and/or loading, and is often squared off making it vulnerable to swamping.

Portable fuel tanks should be filled outside of the boat. All sources of ignition in the area of fueling (e.g., engines, stoves or heat producing equipment and electrical equipment) should be secured while fueling.

Strict adherence to the buddy system must be observed in small boats; and all boats should be in direct visual or radio contact with a shore base at all times.

To avoid slipping on wet decks or falling in small boats, personnel should remain seated while boat is underway. Horseplay and speeding must be strictly prohibited. Personnel should keep their center of gravity as low as possible while working in small boats.

Boat operators must also ensure that boats are not overloaded. The capacity should be marked on a label on the boat. If it is not a general rule of thumb is:

LENGTH x WIDTH / 15 = PEOPLE (150 lbs)

Since equipment adds to the weight it should be considered as well. Weight should be distributed evenly.

Personnel working in or operating small boats should be equipped with appropriate shoes/boots designed to help maintain traction on wet surfaces.

Safety sunglasses, and hearing protection should be worn by personnel working in or operating small boats where appropriate.

Fixed ladders or other substantial access/egress should be provided at boat transfer locations exceeding several feet.

Depending on the specific nature of the operations (e.g., work in remote areas), other emergency equipment which should be considered such as: anchors, radios, bailers, first aid kits, and additional means of propulsion (e.g., paddles).

Workers should be cautioned about using their legs as fenders, or getting their hands, arms, or legs between vessels or between vessels and docks or fixed structures.

ATTACHMENT (___): ON-SITE MEDICAL MONITORING (ENTRY TEAM)

Entry team personnel (including all personnel potentially entering controlled areas in LEVEL A/B/C) are to be monitored for blood pressure, pulse rate, temperature (oral) and body weight.

There are numerous factors which effect allowable ranges so that each individual must be evaluated on a case-by-case basis by the site EMT (or other medical personnel), Site Safety Officer and Site Supervisor.

The following typical values are provided only as a starting guideline:

- Max Blood Pressure: 140 diastolic/100 systolic
- Max Pulse Rate: 100 bpm
- Body Temperature: 99.2 deg.F (Max) / 98.0 deg.F (Min) or +/- 0.6 deg.F from normal
- Body Weight Loss: 1.5% (rule of thumb)

ATTACHMENT (___): ON-SITE MEDICAL MONITORING (ENTRY TEAM)

Site Name:						**Date:**					
MEDICAL MONITORING LOG											
Pre-entry						**Post-entry**					
Name	**Temp**	**B/P**	**Pulse**	**Weight** (1st entry only)	**Time**	**Temp**	**B/P**	**Pulse**	**Weight** (last entry only)	**Time**	**Site Safety Officer's Initials**

ATTACHMENT (___): SITE SAFETY PLAN EVALUATION CHECKLIST

Page 1 of 5

NAME OF PLAN REVIEWED:

_____

PLAN DRAFTED BY (Name/Organization):

_____

PLAN REVIEWED BY: _____

DATE OF REVIEW: _____

REVIEW INCLUDES (check those appropriate):

(__) Comprehensive Workplan (post-emergency)
(__) Safety & Health Program (for planning not site-specific)
(__) Site-Specific Site Safety & Health Plan (post-emergency)
(__) Emergency Response Plans (emergency phase & routine sites)

I. Comprehensive Workplan (1910.120(b)(3)):

[ ] Work tasks, and objectives defined
[ ] Methods of accomplishing tasks & objectives defined
[ ] Personnel requirements for work plan accomplishments
[ ] Training requirements identified (see 1910.120(e))
[ ] Informational programs implemented (see 1910.120(i))
[ ] Medical surveillance program (see 1910.120(f))

II. Safety and Health Program (1910.120(b)). (NOTE: This is not the same as the site-specific plan addressed in III. below.)

A. General:

[ ] A written safety and health program (1910.120(b)(1)) may be incorporated in other documents
[ ] Organizational Structure (1910.120(b)(1)(ii)(A)
[ ] Workplan (B) checklist above (see I. above)
[ ] Site-Specific Safety & Health Plan (C) (see III. below)
[ ] Safety and Health Training Program (D)
[ ] Medical surveillance program (E)
[ ] Employer SOP on Safety and Health (F)

ATTACHMENT (___): SITE SAFETY PLAN EVALUATION CHECKLIST

B. Organization Structure (1910.120(b)(2)):

[ ] Chain of command identified
[ ] Responsibilities of supervisors and employees
[ ] Identifies supervisor (A)
[ ] Identifies site safety and health supervisor(s) (B)
[ ] Other personnel; functions and responsibilities (C)
[ ] Lines of authority/responsibility/communications (D)

III. SITE-SPECIFIC Site Safety & Health Plan (1910.120(b)(4):

For spill response operations (as opposed to those that start from a remedial action) these plans will vary in detail as the response progresses. During the initial emergency phase responders rely on generic emergency response plans—contingency plans--while a site-specific plan is being developed. As the response progresses into post-emergency phase recovery operations a basic site-specific plan is used and may become quite detailed for prolonged or large cleanups. Finally a spill may become a fully controlled site cleanup (e.g., remedial cleanups) where a fully developed site-specific plan is developed, including detailed emergency response plans for on-site emergencies.

A. General:

[ ] Risks for each task in work plan assessed
[ ] Protective equip identified for each task/objective
[ ] Frequency and types of air monitoring identified
[ ] Frequency and types of personnel monitoring identified
[ ] Air monitoring instruments to be used identified
[ ] Maintenance and calibration for instrumentation (E)
[ ] Use of "buddy system" identified
[ ] Safe working practices identified
[ ] Decontamination procedures identified (G)
[ ] Emergency response plan identified (H)
[ ] Spill Containment Program identified (J)
[ ] Pre-entry briefings provided for (1910.120(b)4)(iii))
[ ] Provisions for continual evaluation of plan made (iv)
[ ] Employee training assignments made
[ ] Medical surveillance requirements
[ ] Site control measures identified (F)
[ ] Sampling techniques identified
[ ] Site map identified
[ ] Work zones identified
[ ] Alerting means for emergencies
[ ] Nearest medical assistance identified
[ ] Confined space entry procedures (I)

ATTACHMENT (___): SITE SAFETY PLAN EVALUATION CHECKLIST

B. Site Characterization and Analysis (1910.120(c))

[ ] Hazardous waste sites shall be evaluated to identify specific site hazards and determine appropriate safety and health controls

C. Preliminary Evaluation:

[ ] Performed prior to site entry
[ ] Performed by a qualified person
[ ] Protection methods and site controls identified
[ ] All inhalation/skin hazards identified
[ ] Location and approximate size of site
[ ] Description of response activity
[ ] Duration of response activity
[ ] Site topography and accessibility identified (include air and ground accessibility)
[ ] Safety and health hazards anticipated listed
[ ] Pathways for hazardous substance dispersion identified
[ ] Status of emergency response units identified (rescue, fire, hazmat)
[ ] Hazardous substances listed and associated hazards
[ ] If SCBA is not used and potential for inhalation hazard might exist: an EEBA shall be used with 5 minutes of air

D. Risk Identification (1910.120(c)(7))

[ ] Employees on site shall be informed of identified risks
[ ] All information concerning the chemical physical and toxicological properties of each substance available to the employer shall be made available to the employee

E. Detailed Evaluation (1910.120(c)(2))

[ ] Immediately after preliminary evaluation a detailed evaluation will be conducted to determine safety controls and protection needed

F. Monitoring (1910.120(h))

[ ] Monitoring is required during initial entry
[ ] Monitoring is required periodically
[ ] Personnel monitoring is also required

ATTACHMENT (___): SITE SAFETY PLAN EVALUATION CHECKLIST

G. Illumination Requirements: (1910.120(m))

[ ] Areas accessible to employees shall be lighted not less than the intensities outlined in Table H-120.1

H. Sanitation Requirements: (1910.120(n))

[ ] Water containers shall be tight top closed and equipped with a tap and clearly labeled for use. A disposal unit must be provided for used cups and a sanitary unit for unused cups (1)(i-iv). They shall not be crossed connected to non-potable water containers.
[ ] Non-potable water must be clearly marked per (n)(2)
[ ] Toilet facilities must be provided per (n)(3)
[ ] Washing facilities must be in proximity per (n)(6)
[ ] Showers and change rooms per (n)(7)
[ ] Employers shall ensure that employees shower at the end of when leaving the hazardous waste site

IV. Emergency Response Plans (1910.120(l) and (q)) for emergency response operations (e.g., contingency plans used prior to site safety plan development), and routine sites (e.g., emergency plans for remedial sites).

A. Purpose is to prepare for anticipated emergencies

[ ] Shall be written and available for inspection

B. Elements: (1910.120(l)(2)(i-xi))

[ ] Shall address pre-emergency planning
[ ] Personnel roles, lines of communication identified
[ ] Emergency recognition and prevention addressed
[ ] Safe distances and places of refuge established
[ ] Site security and control addressed
[ ] Evacuation routes and procedures established
[ ] Emergency medical treatment and first aid
[ ] Emergency Decon procedures identified
[ ] Emergency alerting and response procedures identified
[ ] Critique of response and follow up
[ ] PPE and emergency equipment identified

ATTACHMENT (___): SITE SAFETY PLAN EVALUATION CHECKLIST

C. Additional Elements: (1910.120(l)(3)(i)(A-B))

[ ] Site topography, layout and prevailing weather
[ ] Procedures for reporting incidents to: local, state and federal government agencies

D. Additional Requirements: (1910.120(l)(3)(ii-viii))

[ ] Emergency response plan shall be a separate section
[ ] ERP must be compatible with fed, state & local plans
[ ] The ERP shall be rehearsed as part of onsite training
[ ] The ERP shall be current
[ ] An employee alarm system shall be installed to notify persons of an emergency situation

ATTACHMENT (___): MOTOR VEHICLE SAFETY BRIEFING

One of the most dangerous operations performed by pollution response personnel is driving to and from the spill site. This is particularly true when driving vehicles that you are unfamiliar with such as motor pool and rental vehicles.

Familiarize yourself with your vehicle before driving. Walk around and check the outside condition, familiarize yourself with the interior as well, and make all adjustments before driving a vehicle.

Get your attitude right before driving.

- Pollution response personnel must function with "deliberate speed"... not reckless speed.
- Forget schedules while driving! The road is no place to make up lost time.
- Settle down. Do not bring frustrations into the vehicle with you.
- Make up your mind to be the most courteous driver on the road. Forget about getting even with bad drivers on the road. Forget about competing with other drivers.
- Expect other drivers to make stupid mistakes, and prepare to deal with their mistakes.
- Having the right-of-way is no substitute for being alive. Expect the other drivers to break the rules.

Use your parking lights only when parked. Use your headlights during all conditions of reduced visibility (dawn, dusk, fog).

Do not drive under the influence of alcohol or drugs. Coffee, cold showers, fresh air, or other "remedies" will not make you sober. Only time will make you sober.

Coffee is also a drug and may actually cause hallucinations.

Take frequent breaks about every hour or 100 miles. If you decide to take a nap, pull over at a well lighted rest stop and keep your doors locked while you are sleeping.

ATTACHMENT (___): MOTOR VEHICLE SAFETY BRIEFING

Conditions that increase the likelihood of highway hypnosis include:

- Driving too long without a break
- Driving at night
- Staring straight ahead instead of scanning all directions

Look ahead for problems and maintain a safe distance behind the car in front of you.

Slow and steady is the best pace for driving on snow, ice, or other slippery road surfaces. Do not hit your brakes hard or accelerate quickly.

Do not stare into the headlights of oncoming traffic.

ATTACHMENT (___): DRUM HANDLING AND SPILL CONTAINMENT

Detailed regulations regarding drum handling and spill containment can be found at 29 CFR 1910.120(j).

- Handling Drums
    - Drums shall be inspected and given a unique identification prior to being moved.
    - Movement of drums must be kept to a minimum.
    - To the greatest extent possible, drums shall not be moved by unaided manual methods. __ Safe manual lifting procedures are provided as Attachment _____.
    - Prior to shipment, each drum must be in good condition (or overpacked) and properly labeled in accordance with 49 CFR requirements.
    - A log shall be maintained to keep track of sampling, repacking/overpacking, bulking/consolidation, on -site movement, off-site shipment, and any other significant events related to each individual drum.
    - Bulking or product consolidation is allowed only after individual product contents have been characterized.
    - Metal detectors, ground penetrating devices/systems, or other detection methods shall be used to determine the location of buried drums before excavation at sites.
- Opening and sampling drums
    - If airlines are used, they must be located to prevent physical damage or contamination.
    - When opening drums, the minimum number of employees shall be allowed in the work area.
    - To the extent possible drums shall be opened remotely or with a suitable shield for personnel. IN PARTICULAR drums showing signs of being pressurized (high pressure or vacuum), containing flammable, or explosive materials must be opened with appropriate remote opening equipment and shields.

ATTACHMENT (___): DRUM HANDLING AND SPILL CONTAINMENT

- When opening potentially flammable product drums spark proof tools shall be used. Fire suppression equipment must be located nearby in a shielded/protected location ready for use.

- A specific work plan shall be developed for handling of drums or containers involving RADIOACTIVE or SHOCK SENSITIVE materials, and LAB PACKS. Lab packs must be opened and inner packages characterized only by personnel familiar with lab pack hazards, inspection, and classification. CRYSTALLIZED materials on inner packages in lab packs shall be handled as SHOCK SENSITIVE until characterized otherwise.

- Specific equipment to be used for sampling drums shall be noted in the work plan.

- Staging and containment areas

  - Pathways for hazardous substance dispersion:

    __Pathways are depicted on the site safety map provided as Attachment _.

    _____

    _____

  - When drums are moved from their original locations to a work area or staging area, a spill containment area must be constructed for those locations. The containment should be able to contain the maximum loss from any of the containers in the area.

  - Safe access and egress points must be provided to all staging areas. Adequate room and ramps must be provided for heavy equipment used to handle drums (e.g., bobcats with drum grapplers). A secondary emergency egress point must also be identified.

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

5.5 WASTE MANAGEMENT

Please refer to the Northwest Area Contingency Plan (NWACP), Section 9405 for Disposal Guidance for Washington and Oregon State. The Disposal Guidance includes a sample disposal plan and waste management tracking forms. The NWACP can be found at the following website: www.rrt10nwac.com/NWACP

In **FIGURE 5.3**, there are some examples of temporary storage methods for various types of products. Ensure debris is stored on impermeable sheeting to prevent penetration into the soil should a breach of the container occur.

Temporary storage sites should be located on level parking areas or undeveloped lots with good access to cleanup operations as well as nearby streets and highways. Sites should be at least three meters above mean sea level. A 1- to 1-1/2 meter high earth berm should be constructed around the perimeter of the site and the site lined with an impermeable liner to the top of the berm.

Temporary storage sites should be regularly monitored to ensure that oil is not escaping the berm. Free oil accumulating in the bermed area should be removed as soon as possible.

Oil and oily waste disposal methods are described in **FIGURE 5.4**. A general waste containment and disposal checklist is provided in **FIGURE 5.5**.

FIGURE 5.3 – Temporary Storage Methods

	PRODUCT						
CONTAINMENT	OIL	OIL/WATER	OIL/SOIL	OIL/DEBRIS (Small)	OIL/DEBRIS (Medium)	OIL/DEBRIS (Large)	CAPACITY
Drums	X	X	X	X			.2-.5 yd^3
Bags			X	X	X		1-2 yd^3
Boxes			X	X	X		1-5 yd^3
Open Top Rolloff	X	X	X	X	X	X	8-40 yd^3
Roll Top Rolloff	X	X	X	X	X	X	15-25 yd^3
Vacuum Box	X	X					15-25 yd^3
Frac Tank	X	X					500-20,000 gal
Poly Tank	X	X					200-4,000 gal
Vacuum Truck	X	X	X				2,000-5,000 gal
Tank Trailer	X	X					2,000-4,000 gal
Barge	X	X					3,000+gal
Berm, 4 ft	X	X	X	X	X	X	1yd^3
Bladders	X	X					25-1,500 gal

FIGURE 5.4 – Oil and Oily Waste Disposal Methods

Waste Type	Natural Degradation	Pit Burial	In-Situ Burning	Open Pit Burning	Portable Incineration	Recycling	Reclaim
Fresh Oil	X	X	X	X	X	X	X
Emulsified Oil	X	X		X	X	X	
Weathered Oil	X	X		X	X	X	
Oily, Small, Light (Sorbent, Snakes, Cups, Leaves)	X	X		X	X		
Oily, Large, Heavy (Logs, Boards, Seaweed Mats)	X	X		X	X		
Oily Sand and Gravel	X	X			X		
Quantity	<100 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls

FIGURE 5.5 – General Waste Containment and Disposal Checklist

Consideration	Yes/No/NA
Is the material being recovered a waste or reusable product?	
Has all recovered waste been containerized and secured so there is no potential for further leakage while the material is being stored?	
Has each of the discrete waste streams been identified?	
Has a representative sample of each waste stream been collected?	
Has the sample been sent to an approved laboratory for the appropriate analysis, i.e. hazardous waste determination?	
Have the appropriate waste classification and waste code numbers for the individual waste streams been received?	
Have a temporary EPA identification and generator numbers been received, if they are not already registered with EPA?	
Have the services of a registered hazardous waste transporter been contracted, if waste is hazardous?	
If the waste is nonhazardous, is the transporter registered?	
Is the waste being taken to an approved disposal site?	
Is the waste hazardous or Class I nonhazardous?	
If the waste is hazardous or Class I nonhazardous, is a manifest being used?	
Is the manifest properly completed?	
Is the Land Disposal Form properly completed?	
Are all federal, state, and local laws/regulations being followed?	
Are all necessary permits being obtained?	
Has a disposal plan been submitted for approval/review?	
Have PPE and waste-handling procedures been included in the Site Safety Plan to protect the health and safety of waste handling personnel?	

5.6 RESPONSE TECHNOLGIES

Though mechanical cleanup and recovery is always the initial and primary response tool, other response technologies are considered by the Region X RRT and Northwest Area Committee to be integral components of effective spill response that should be available for use, as appropriate, in a timely and efficient manner. The use of response technologies such as in- situ burning, dispersants, and other oil spill cleanup agents should be considered when the environmental benefit of their use is expected to outweigh adverse effects.

Olympic Pipe Line Company (OPLC), through its contract with Marine Spill Response Corporation (MSRC), has available inventory and experience to deploy response technologies in a timely and efficient manner so that they are most effective. A checklist for various response technologies can be found in **FIGURE 5.6**.

FIGURE 5.6 – Response Technologies Checklist

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

5.6.1 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. Dispersants can be used to disperse the oil into the water by breaking it into small droplets and suspending them in the water. This process occurs naturally very slowly but can be accelerated by the application of a dispersant.

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

The success of a dispersant operation depends on many variables, including:

- type of dispersant used,
- dosage of dispersant,
- application technique,
- type and condition of oil,
- size of area to be treated,
- weather and water conditions, and
- time available to complete the operation.

The most important element for successful implementation of a dispersant is time. The moment oil is spilled in the water; it begins to weather causing the oil properties to change. Evaporation removes the lighter ends of the oil leaving the more viscous fraction behind. As its viscosity and other properties change, it becomes less likely that dispersant use will be successful.

Olympic Pipe Line Company will not use dispersants without the concurrence of the FOSC. Refer to Section 4610 of the Northwest Area Contingency Plan (NWACP) for dispersant use policies and procedures. The NWACP can be found at the following website: www.rrt10nwac.com/NWACP.

To apply for dispersant approval, use the **FOSC Dispersant Authorization Checklist** in **SECTION 9406** of the NWACP.

Please note that there is a **No Dispersant Use Zone** in marine waters that are both less than three nautical miles from the coastline and less than or equal to 10 fathoms (60 feet) in depth; in marine waters south of a line drawn between Point Wilson (48º 08' 41" N, 122º45' 19" W) and Admiralty Head (48º 09' 20" N, 122º 40' 42" W); and in freshwater environments.

5.6.2 In-Situ Burining

It is the policy of the Northwest Area Committee to use, and in certain cases, encourage in-situ burning, provided that requirements specified have been met. A primary consideration in the decision to burn is the protection and safety of human life. The authority to approve a burn rests with the Unified Command, who must determine that an application to burn conforms to the guidelines in the Northwest Area Contingency Plan (NWACP). The decision to burn or not burn must be made expeditiously.

Pre-approval areas are areas more than three miles from significant population centers (100 people per square mile). All other areas will be considered on a case-by-case basis. Monitoring and sampling will be conducted where there is the potential for people to be exposed to the smoke. As general guidance, people should not be exposed to small particles (PM-10) in concentrations that exceed 150 micrograms per cubic meter of air averaged over one hour. The concentrations should never exceed 150 micrograms per cubic meter averaged over 24 hours.

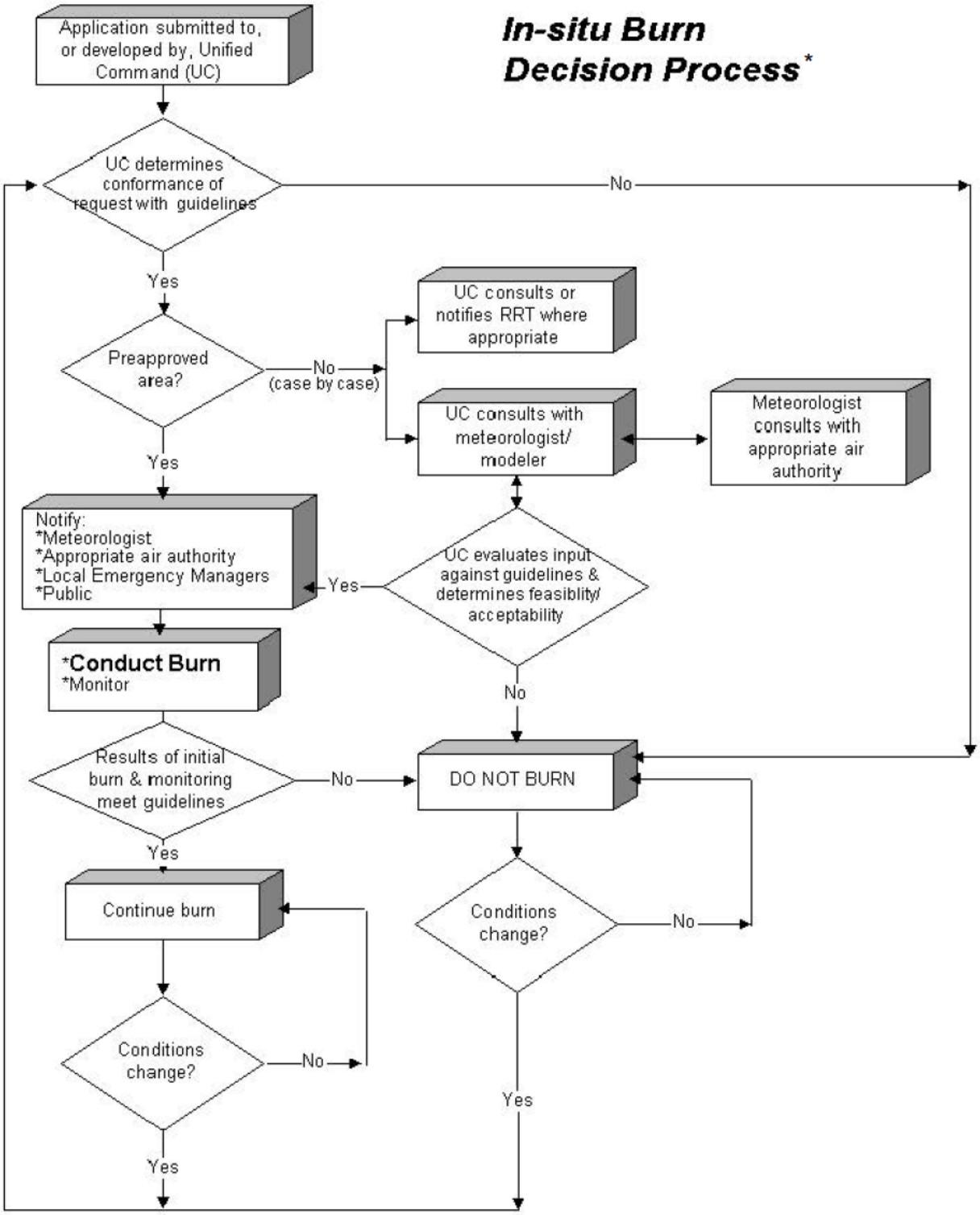
Authorization procedures will differ depending upon whether the spill location is in a pre-approval area or is decided on a case-by-case basis. Regardless of location, the Unified Command (UC) directs actions that will provide for maximum environmental protection while ensuring human safety. Authorization to use in situ burning rests with the UC. **FIGURE 5.7** summarizes the process for making a preliminary burn decision.

While no geographic areas have been excluded from the consideration to use in-situ burning, it is very unlikely that it would be approved in a heavily populated area such as inner Puget Sound or on the Columbia River near Portland because of the increased potential for exposing people to high levels of particulates. However, even in highly populated areas, burning may still be approved in unique circumstances, especially when the volatiles from the unburned oil pose a serious threat to human health.

To apply for in-situ burning approval, see **SECTION 4642** of the NWACP.

The application process begins with a preliminary feasibility analysis (**FIGURE 5.8)**. If the analysis concludes that in-situ burning may be feasible, the application checklist (**FIGURE 5.9)** and window-of-opportunity worksheet (**FIGURE 5.10)** should be completed. Note that the checklist must be updated for each new burn scenario proposed. It is important to note that even if the checklist and worksheet fail to show that in-situ burning is appropriate at one point in time (i.e., a “NO” answer), changes in environmental or other factors may make in-situ burning a feasible option at a later time.

FIGURE 5.7 – In-Situ Burn Decision Process



*Northwest Area Contingency Plan (Section 4640)

FIGURE 5.8 – Preliminary Feasibility Analysis for In Situ Burn

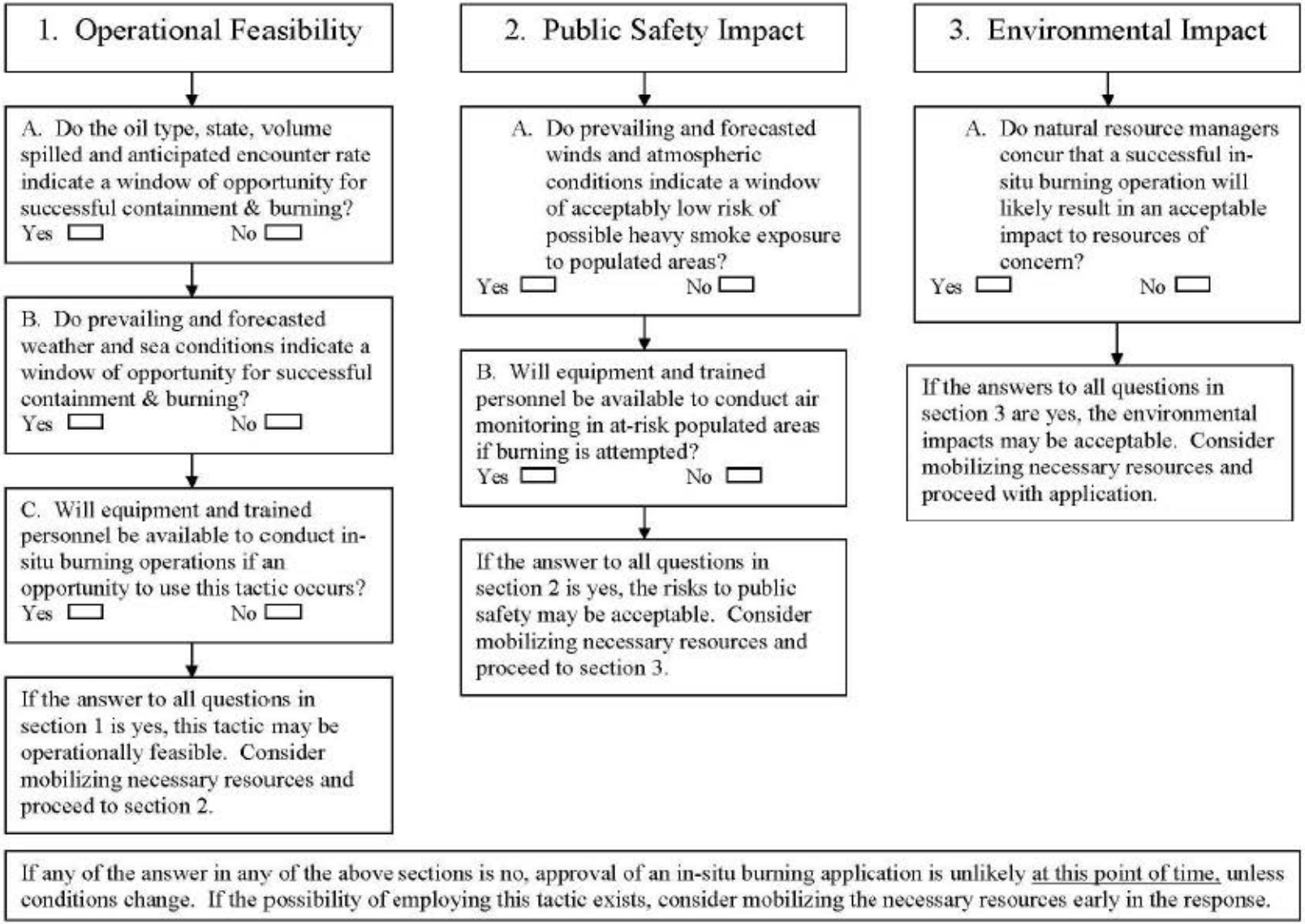


FIGURE 5.9 – In Situ Burn Application Checklist

Spill Data

Date of incident (month/date/year): _____ Time of incident: _____

Name of incident/responsible party :

Location of incident _____ Latitude: _____ N Longitude _____ W

Type(s) of oil spilled:

Estimated volume of oil spilled into water: _____

Estimated volume of oil at risk of spilling: _____

Release status: Stopped __ Intermittent __ Continuous __ Outflow Rate:

Forecasted surface area of spill at time of projected burn: _____
Continuous slick ___ Large patches ___ Ribbons/streamers ____

Will oil concentration be sufficient to burn? Yes ___ No ___

Anticipated oil trajectory (attach NOAA forecasts if available):

Forecasted oil distance/direction to nearest land at time of projected burn:

Expected areas and times of shoreline oil impact:

Estimated percentage of natural dispersion and evaporation during:
first 24 hours _____ second 24 hours _____

Oil emulsification at this time: Unknown ___ None ___ Light (*0-20%*) ___
Moderate (*21-50%*)__ Heavy (*over 50%*) ___

Will emulsification likely be less than 50% at projected time of burn?
Yes __ No __ Unknown __

Distance (*in miles*) and direction to nearest population center
(> 100 people per sq. mile):

Name of nearest population center:

FIGURE 5.9 – In Situ Burn Application Checklist (continued)

Weather/Environmental Conditions at time of projected burn

Temperature: Air = _____ F Water = _____ F

Weather: Clear __ Partly cloudy __ Overcast __ Rain __ Fog __
Snow __ Freezing __

Surface visibility _____ Ceiling level _____

Is prevailing and forecasted visibility more than 500 ft. vertically and 0.5 mile horizontally? Yes ___ No ___

Surface current: Speed _____ Direction _____

Wind conditions: Speed _____ Direction (from) _____

Are prevailing and forecasted winds less than 25 knots? Yes ___ No ___

Tide state: Flood ____ Ebb ____ Slack Water ____

Sea State: Calm ___ Choppy ____ Swell (in feet) ____

Waves: Less than 1 ft __ 1-3 ft __ More than 3 ft __ Direction (from) ____

Other weather/sea condition information:

Proposed Burning Plan

Location of the proposed burn relative to the spill site:

Location of the proposed burn relative to nearest ignitable slick(s):

Location and direction of the proposed burn relative to nearest land:

Can accidental fires be avoided? Yes ___ No ____
If yes, what actions are planned:

Can ignition/burn occur at a safe distance from other response operations and public, recreational, and commercial activities? Yes ___ No ___

Method(s) used to notify residents living within the potential smoke plume trajectory:

Method(s) used to notify mariners and aircraft pilots:

Method(s) used to avoid impacts to marine life in vicinity of burn:

FIGURE 5.9 – In Situ Burn Application Checklist (continued)

Type of ignition system proposed for use:

When will ignition system, fire-resistant boom, and deployment equipment/vessels be on-scene and available for use?

How will ignition be carried out:

If a heli-torch ignition system is to be used, is the helicopter qualified for offshore flight and does it meet FAA certification requirements?
Yes ___ No ____

Method used to collect/concentrate oil, if any:

Amount of fire boom available for use at time of projected burn:
_____ feet

Number of boom-towing vessels and support vessels available:

Proposed location of oil containment relative to spill source:

Proposed burning strategy:
___ Immediate ignition at or near source
___ Ignition away from source after containment and movement to safe location
___ Controlled burning in boom or natural collection site at or near shore
___ Possible need for multiple ignition attempts.

Are floating debris and other safety hazards acceptable? Yes ___ No ___

Are sufficient numbers of trained personnel available on-scene to conduct safe and effective burn? Yes ___ No ___

Estimated amount of oil to be burned:

Estimated duration of burn:

Method of collecting burned oil residue:

Estimated amount of burned oil residue to be collected:

Proposed interim storage and disposal of burned oil residue:

Back-up plan for collecting contained oil if burn fails:

Burn Impacts

Is adequate air modeling support available? Yes ___ No ___

FIGURE 5.9 – In Situ Burn Application Checklist (continued)

Do prevailing conditions and air modeling results indicate that PM-10 standards can be met? Yes ___ No ___

Will visibility remain safe at sensitive locations (e.g., airports, freeways)?
Yes __ No __

Are adequate air support and burn monitoring equipment on-scene and available?
Yes ___ No ___

How will operational impacts to wildlife in vicinity be monitored?

Name of Application Preparer:

Date/Time Submitted to Planning Section Chief: _____

Approval by Planning Chief: _____

Unified Command Decision:

____ Approval to implement burn plan

____ Approval to conduct small pilot burn

____ Burn plan disapproved at this time

FIGURE 5.10 – Window of Opportunity Worksheet

Spill Name: **Spill Time and Date:**

This worksheet should be filled out in conjunction with the in-Situ Burning Application Checklist. Fill in top row based on time of Incident (e.g., if Incident is at 0300, fill that in for hour 1; 0400 for hour 2, etc.) For each worksheet item, mark in each time segment where the item applies. The likely window-of-opportunity equates to those time segments where all items are marked.

Window of Opportunity **Feasibility Factors**	**Hr. 1 Time:**	**Hr. 2 Time:**	**Hr. 3 Time:**	**Hr. 4 Time:**
Operational Outlook				
1. Oil thickness ≥ 2-3mm)				
2. Oil emulsion ≤ 25-50%				
3. Wind speed ≤25 knots				
4. Wave height ≤3-5 feet				
5. Visibility ≥ 500 feet vertically & ≥ 0.5 mile horizontally				
6. Trained personnel on scene & ready				
7. Equipment on scene & ready				
Planning Concerns				
8. Operation poses acceptably low risk to populated areas				
9. Burn poses acceptable risks to resources likely impacted				
Public Safety Concerns				
10. Public notification and controls addressed				
11. Air monitoring equipment & support are set up & ready				

5.6.3 Bioremediation

The use of bioremediation in open water is an unproven technology that currently shows little or no promise of removing significant quantities of oil from the surface of the water prior to shoreline impact or natural dispersion. Bioremediation by nutrient enhancement or seeding of biodegrading organisms is therefore not allowed on the surface of open water.

Seeding of exotic organisms for pollution response is prohibited in Response Region Tem. This is due to unproven efficacy of such procedures and the unknown ecological effects resulting from the implementation of such.

Bioremediation is an effective technique for the encouragement of oil biodegradation on some contaminated shorelines. Bioremediation should be used as the primary treatment only when oil concentration are low (less than 15 grams of oil for every kilogram of sediment) and conventional forms of cleanup (heavy equipment use or manual cleaning) are likely to do more damage than good. Bioremediation should be considered as a polishing technique after gross contamination is removed by conventional means.

The use of bioremediation for oil spill cleanup will be allowed only on a case-by-case basis. The Bioremediation Checklist in **FIGURE 5.11** can be used to present to Unified Command if bioremediation is a viable option.

FIGURE 5.11 – Bioremediation Checklist

BIOREMEDIATION CHECKLIST	
SPILL DATA/INCIDENT INFORMATION	
Cause (specific):	
Date/Time:	
Location:	
Volume and Type of Release (cont., intermittent):	
Potential Volume to be Released:	
Confidence in Data (high, medium, low):	
CHARACTERISTIC OF SPILLED OIL	
Oil Type/Name:	
Specific Gravity:	Flash Point:
Pour Point:	Viscosity:
% Aromatics:	% Saturates:
% Asphaltenes:	
WEATHER AND WATER CONDITONS/FORECAST (48-HR)	
Water Temp:	Air Temp:
Current Info:	Wind Speed:
Salinity:	Wind Direction:
Water Depth:	Sea State:
Tide Info:	
Comments:	

FIGURE 5.11 – Bioremediation Checklist (continued)

	Product 1	Product 2	Product 3
Name			
Manufacturer			
EPA Listed			
State Licensed			
Stockpile Location			
Point of Contact			
When Available			
Amount Available			
Amount Needed			
Amount on Hand			
Toxicity			
Type (concentrate/mix)			
Physical Reactivity			
Applicability on Oil			
Efficiency (% projected)			
Application Means			
Positive Dosage Control			
Dosage Rate Settings			
Dosage Charts Available			
Bioremediation Application Information/Evaluation:			
Proposed Bioremediation Application Plan:			

5.7 DECANTING

During spill response operations, mechanical recovery of oil is often restricted by a number of factors, including the recovery system's oil/water recovery rate, the type of recovery system employed and the amount of tank space available on the recovery unit to hold recovered oil/water mixtures. In addition, the longer oil remains on or in the water, the more it mixes to form an emulsified mousse or highly mixed oil/water liquid, which sometimes contains as much as 70% water and 30% oil, thus consuming significantly more storage space. Decanting is the process of draining off recovered water from portable tanks, internal tanks, collections wells or other storage containers to increase the available storage capacity of recovered oil. When decanting is conducted properly most of the petroleum can be removed from the water.

Pre-Approved Oils

Pre-approval for on water decanting is authorized when pumping recovered oil and water ashore is not practical during the first 24 hours after initial spill discovery. Decanting authorization is granted for the oil products listed below.

- All crude oils;
- Vacuum gas oils;
- Atmospheric gas oils;
- Recycle oils not containing distillates;
- Bunker fuels;
- No. 6 fuel oils;
- Cutter stocks; and
- Coker gas oils.

Decanting of the listed oils is pre-approved if the following conditions are met:

- Pre-Approval is for the first 24 hours after spill discovery. Decanting requests for all the remaining operational periods will need to be completed and submitted to Unified Command. The Responsible Party must fill out the Northwest Area Contingency Plan (NWACP) decanting request and seek Unified Command approval prior to any additional decanting approvals from the second operational period on;
- The Incident Commander must be notified within one hour of decanting being initiated and must then immediately notify the Unified Command;
- The RP assures the Unified Command that they are quickly obtaining adequate oil storage and skimming capacity within the first 24 hours and the responding Primary Response Contractors (PRCs) are expeditiously getting sufficient storage and skimming capacity on site to alleviate the need for prolonged decanting.

Please use the Decanting Authorization Form **FIGURE 5.12** for criteria that must be met prior to decanting for pre-approved oils.

Shore-side container decanting (i.e., vacuum truck, portable tanks, etc.) is not authorized for Pre-approval under this policy. Decanting in areas where vacuum trucks, portable tanks, or other collection systems are used for shore cleanup will be subject to filling out the decanting form in the NWACP prior to authorization and must comply with the same rules as vessels.

Oils Requiring Approval

During a response, when decanting has not been pre-approved for lighter oils, which are not listed above, it will be necessary for response contractors or the responsible party to request from the Unified Command (UC) written authority to decant while recovering oil so that response operations do not cease or become impaired. The UC will consider each request for decanting of lighter oils on a case-by-case basis

Other activities related to possible oil discharges associated with an oil spill event such as actions to save a vessel or protect human life which may include such actions as pumping bilges on a sinking vessel are not covered by this policy.

Please use the Decanting Authorization Form **FIGURE 5.12** for oils that require approval by UC.

FIGURE 5.12 – Decanting Authorization Form

Decision Memo
Decanting Approval Plan

Name of Spill Incident: **Name of Requester:**
Federally Defined response Area: **Product Spilled:**
Effective date(s) of approval: **Current Storage Capacity on site:**

The Federal and State OSC's, under the authority of RCW 90.56.320(l) and WAC 173-201A-110 (in Washington) or ORS 468B.305 (in Oregon), hereby approve the use of decanting as a means of expediting the recovery of oil during the above mentioned spill clean-up operation. The following approval provides authority to conduct decanting of oil so that response operations do not cease or become impaired. FOSC authorization is required in all cases, and SOSC authorization is required for decanting within state waters. The OSC should acknowledge that recovery operations enhanced by decanting will actually reduce the overall quantity of pollutants in a more timely and effective manner to facilitate cleanup operations.

The following criteria should be followed in order for decanting to proceed in an efficient manner:

1) All decanting should be done in a designated "response area" within a collection area, vessel collection well, recovery belt, weir area, or directly in front of a recovery system.
2) Vessels employing sweep booms with recovery pumps in the apex of the boom should decant forward of the recovery pump.
3) All vessels, motor vehicles and other equipment not equipped with an oil/water separator would allow retention time for oil held in internal or portable tanks before decanting commences.
4) A containment boom must / need not (circle one) be deployed around the collection area to minimize loss of the decanted oil or entrainment.
5) Visual monitoring of the decanting area shall be maintained so that discharge of oil in the decanted water is detected promptly.
6) Tanks used for decanting will be tested prior to use to ensure there are no contaminates from previous activities and that the water is safe to discharge back into the environment.
7) Settling times for oil water separation on board skimmers is estimated to be_____ .
8) Additional conditions:

Approval: (check one)Yes_____ No_____
Environmental Unit (Planning) _____
FOSC_____
SOSC_____
Reason for disapproval:

5.8 DECONTAMINATION PLAN

Incident Name:_____ **Plan Location:_____**

Effective Date of Plan:_____ **Effective Time Period of Plan:_____**

Spill Location:_____ **Plan Prepared By:_____**

1. Decontamination Zones:

Work areas will be divided into three zones;

- Clean Zone (Cold Zone),
- Contamination, Reduction Zone (Warm Zone)
- Exclusion Zone (Hot Zone)

These zones are to be identified at each work area by signs and/or barrier tape or other means. Decontamination is performed in the Contamination Reduction Zone. Each time cleanup workers exit the Exclusion Zone they must perform decontamination procedures.

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

2. Decontamination Stations:

Decontamination is performed at a series of stations within the Contamination Reduction Zone. The floor of each station is covered with PVC sheets to prevent contamination of the soil. Dikes are installed under these sheets to prevent contaminated runoff from impacting soil.

MAXIMUM MEASURES FOR LEVEL C DECONTAMINATION
(See **FIGURE 5.13**)

STATION 1: Segregated Equipment Drop	1. Deposit equipment used on site (tools, sampling devices and container, 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	2. Scrub outer boot cover and gloves with decon solution or detergent and water
STATION 3: Boot Cover and Glove Rinse	3. Rinse off decon solution from Station 2 using copious amounts of water.
STATION 4: Tape Removal	4. Remove tape around boots and gloves and deposit in container with plastic liner.
STATION 5: Boot Cover Removal	5. Remove boot covers and deposit in containers with plastic liner.
STATION 6: Outer Glove Removal	6. Remove outer gloves and deposit in container with plastic liner.
STATION 7: Suit and Boot Wash	7. Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decon solution.
STATION 8: Suit and Boot, and Glove Rinse	8. Rinse off decon solution using water. Repeat as many times as necessary.
STATION 9: Canister or Mask Change	9. If worker leaves exclusion zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, and joints taped, worker returns to duty.

STATION 10:	Safety Boot Removal	10.	Remove safety boots and deposit in container with plastic liner.
STATION 11:	Splash Suit Removal	11.	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
STATION 12:	Inner Glove Rinse	12.	Wash inner gloves with decon solution.
STATION 13:	Inner Glove Wash	13.	Rinse inner gloves with water.
STATION 14:	Face Piece Removal	14.	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
STATION 15:	Inner Glove Removal	15.	Remove inner gloves and deposit in lined container.
STATION 16:	Inner Clothing Removal	16.	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 contaminants might have been transferred in removing the fully-encapsulating suit.
STATION 17:	Field Wash	17.	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:	Redress	18.	Put on clean clothes.

MINIMUM MEASURES FOR LEVEL C DECONTAMINATION
(See **FIGURE 5.14**)

STATION 1:	Equipment Drop	1.	Deposit equipment used on site (tools, sampling devices and container, 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	2.	Scrub outer boots, outer gloves and splash suit with decon solution or detergent and water. Rinse off using copious amounts of water.
STATION 3:	Outer Boot and Glove Removal	3.	Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4:	Canister or Mask Change	4.	If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, joints taped, and worker returns to duty.
STATION 5:	Boot, Gloves and Outer Garment Removal	5.	Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
STATION 6:	Face Piece Removal	6.	Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7:	Field Wash	7.	Hands and face are thoroughly washed. Shower as soon as possible.

FIGURE 5.13 – Decon Procedures Maximum Decontamination Layout Level C Protection

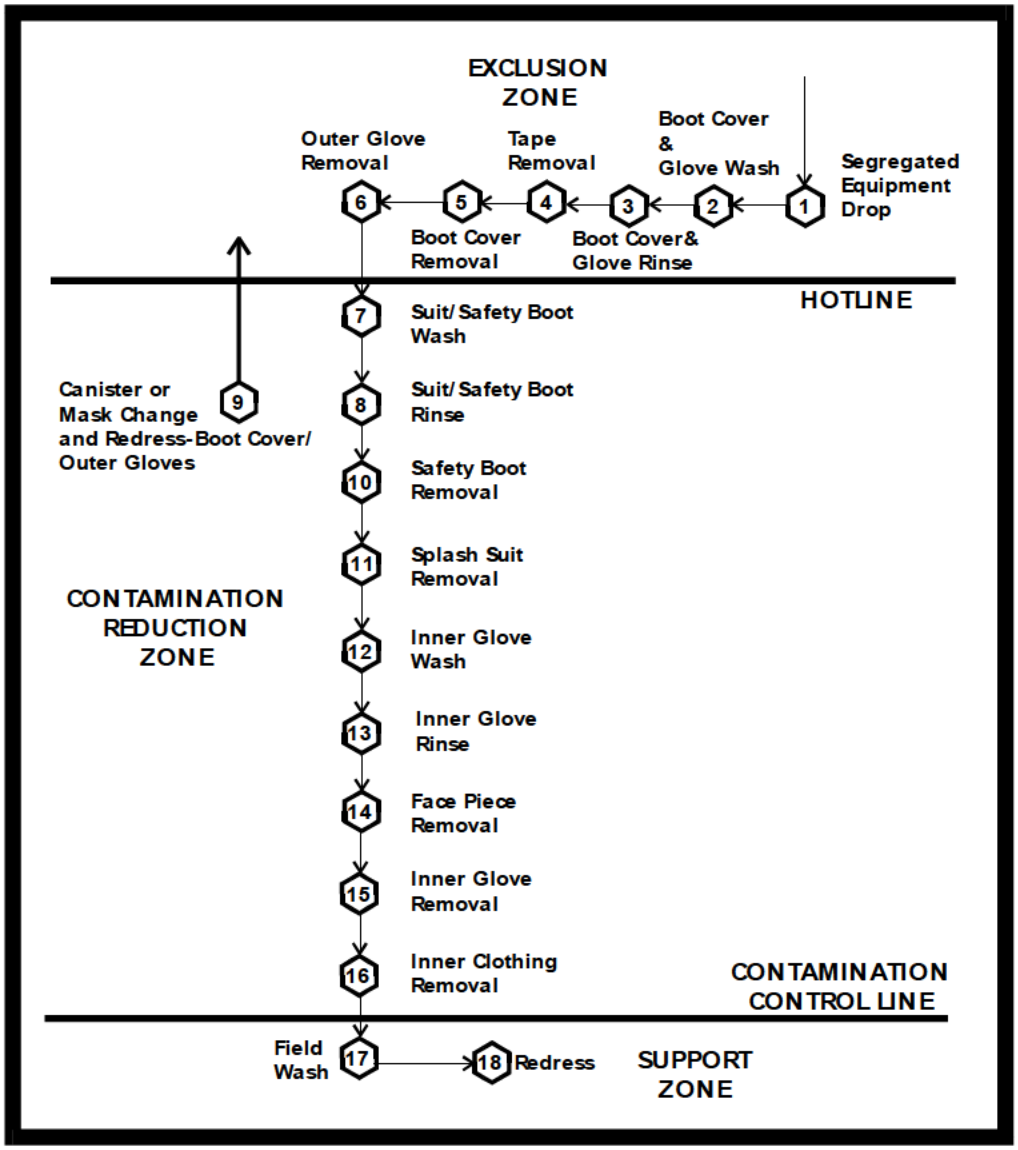
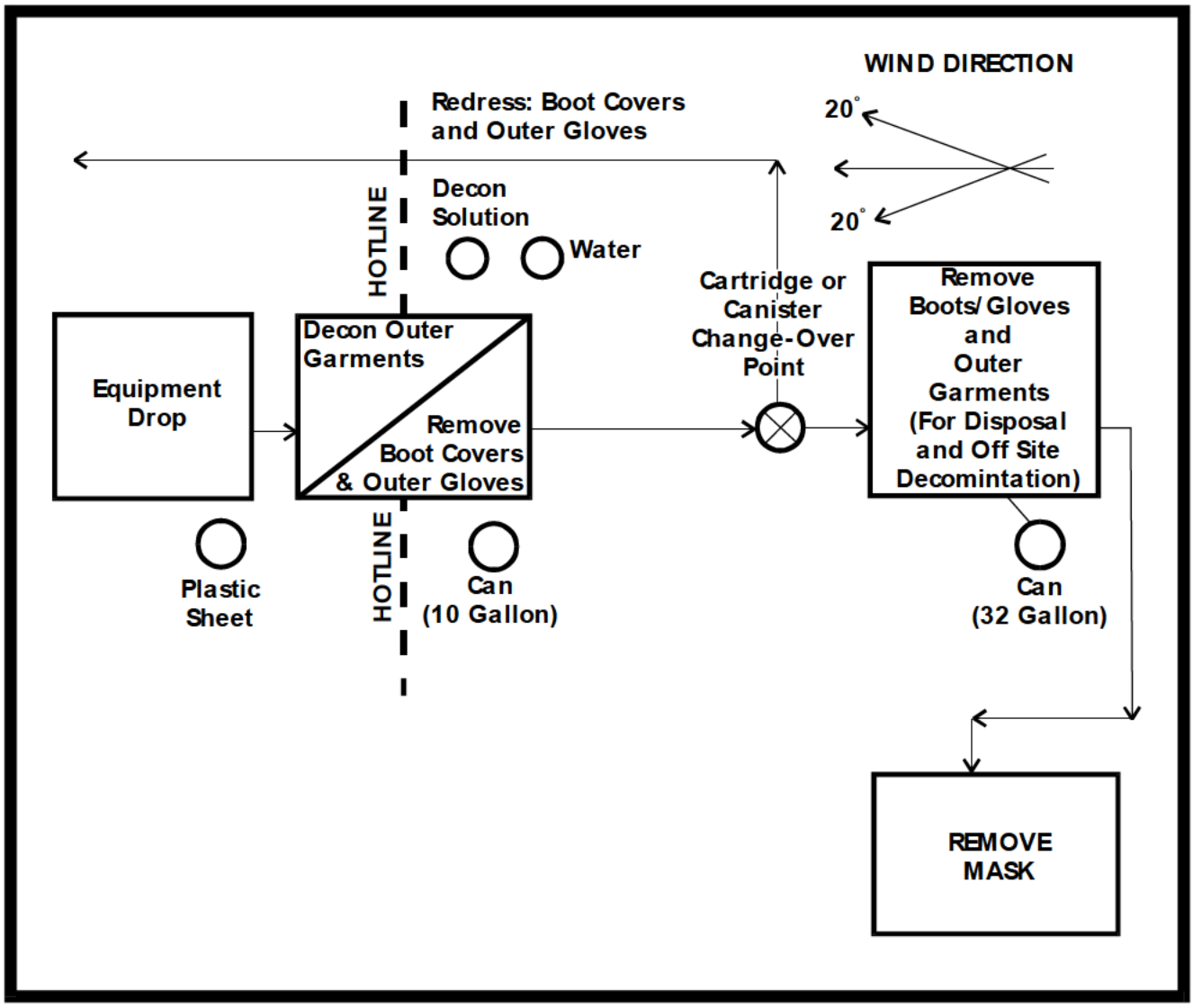


FIGURE 5.14 – Decon Procedures Minimum Decontamination Layout Level C Protection



SECTION 6
SENSITIVE AREAS / RESPONSE TACTICS

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6.1 INTRODUCTION

In the event of an oil spill, it may be necessary to protect nearby sensitive areas if it appears that local containment and recovery efforts will not be sufficient to control the entire spill. A critical initial step in protecting sensitive resources is identifying the presence and types of resources in the likely path of the oil. Once these resources have been identified, decisions need to be made as to the proper protection techniques for each locale and the priority for application of resources to each sensitive site. **FIGURE 6.1** presents an implementation sequence for protection of sensitive areas.

This section describes in general terms different ecologically and culturally/economically sensitive areas. Specific sensitive resources which may be impacted by an off-site spill from the Olympic Pipeline are provided in the Northwest Area Committee Geographic Response Plans. Methods for protecting these sensitive resources are also discussed in **APPENDIX F** and discussed in the ACP.

6.2 TYPES OF SENSITIVE RESOURCES

Key resources requiring protection from oil spills include fish and wildlife species, sensitive habitats, and recreationally, culturally, and economically important areas. Examples of sensitive species include shore birds and other water fowl, seals and other marine mammals, shellfish, and commercially important finfish, as well as species with limited distribution or populations. Sensitive habitats range from protected bays with marshes and tidal flats to open coast areas used as marine mammal or bird breeding sites. Areas of more direct importance to humans include native lands, waterfront parks and recreational areas, as well as harbors and anchorages. These sensitive resources are discussed below and in **APPENDIX F** with a presentation of NOAA's ESI classification scheme.

6.2.1 General Sensitive Resources

For shoreline areas that are not associated with a particular sensitivity, a general sensitivity ranking system known as the ESI has been adopted by NOAA and can be used for prioritization. The ESI system ranks various shoreline types in order of their increasing potential for long-term persistence and biological damage (i.e., an ESI ranking of 2 has a higher overall sensitivity than a ranking of 1). A summary of shoreline types and associated rankings is provided in **APPENDIX F**.

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Protection strategies should also consider the impact of oil on the general intertidal biological community. The level of impact is often dependent on the type of shoreline as different shoreline/substrate types support different intertidal communities. Shore types affects oil deposition within the intertidal area as well as oil persistence. Description of the most common types of shorelines, their associated biological communities, and the potential impacts of oil spills are provided in **APPENDIX F**. Shoreline types indicative of the area may be found in the ACP.

6.2.2 ENVIRONMENTAL FACTORS EFFECTING RESPONSE

Seasonal variations in precipitation, temperature, wind, tides and hours of available daylight will affect response efforts. Precipitation, wind and temperature will all affect the behavior of the spilled product as well as the function of recovery equipment and crews. The lunar variation in the tide cycles depending on the location of the release will dictate many aspects of shoreline cleanup and protection efforts. Tide information needs to be immediately accessible to the response team for spill trajectory analysis and deployment planning. Annual variation in the hours of daylight in this region can extend the working day to greater than 15 hours in the summer or reduce the day to less than 8 hours in the winter. The winter months of December through March combine the lowest temperatures, highest winds, likelihood of precipitation with the shortest daylight working hours of the year. All of these factors will challenge response efforts and make response planning more important.

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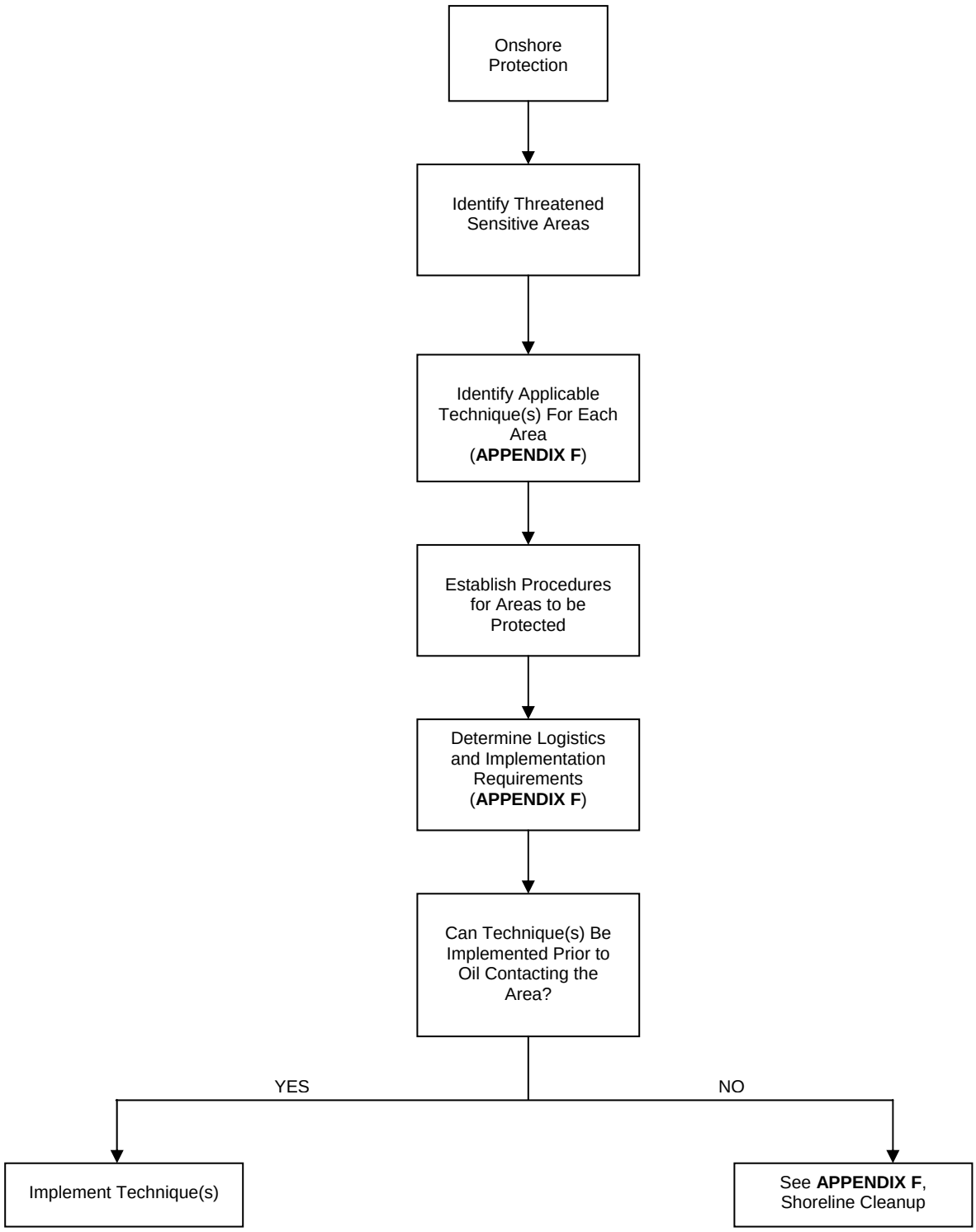
FIGURE 6.1 - SENSITIVE AREA PROTECTION IMPLEMENTATION SEQUENCE



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6.3 AREA DESCRIPTION

There are environmentally and economically important sites in the vicinity of this Pipeline, however, there are no known culturally important sites.

The marine and estuarine waters within the San Juan Islands and Puget Sound are among the most biologically rich and sensitive areas of the State of Washington. A wide diversity of shoreline and marine habitats (estuaries, rocks, reefs, and islands), abundant food resources, and exceptional water quality all contribute to making this area especially valuable to wildlife.

This region contains a number of small to medium-sized seabird nesting colonies, a multitude of marine mammal breeding and resting sites, rearing and feeding habitat for marine fish, and one of the most impressive arrays of marine invertebrates in the world. The region is also a temporary home to many species of marine birds and mammals that are seasonal residents or pass through the area during migration.

Flight restriction zones exist in the area to protect sensitive wildlife species. Zones immediately along the Pipeline are provided in the ACP.

6.3.1 Marine Mammals

Common species of whales and dolphins found within the area include gray whale, orca, Dall's porpoise and harbor porpoise. In addition, the harbor seal is a permanent resident of the area. Three additional species occur as regular seasonal residents or migrants: the Steller sea lion, California sea lion, and northern elephant seal. Although relatively few Steller sea lions are found in this area, this species is of special concern because it is listed as a Threatened Species. This region also supports a large population of river otters which are largely marine in their habits.

The islands, nearshore rocks, and beaches of the region provide pupping and resting sites for harbor seals. The largest concentrations are found in the vicinity of Boundary Bay and Padilla Bay. Other smaller sites are scattered throughout the entire area.

Nearshore waters are used as feeding areas by seals, sea lions, gray whales, harbor porpoise, and river otters.

6.3.2 Birds

Many species of marine birds and shorebirds are either residents or seasonal visitors with this area. Much of the seabird nesting is scattered throughout the region on offshore rocks, exposed rocky coasts or on pilings.

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Bald eagles and peregrine falcons nest in the area and are closely associated with the marine ecosystem because of their feeding habits and choice of Nesting sites. These birds are either listed as Threatened or Endangered and are therefore of particular concern. This area hosts a large wintering population of bald eagles.

Marbled murrelets are unique among the area's seabirds because they nest inland in old-growth forests, yet spend much of their time feeding and resting on marine waters in the nearshore environment. This species is of special concern since its been shown to be highly vulnerable to oil spills, and is listed as a Threatened or Endangered species.

In addition to supporting a wide variety of resident birds, Puget Sound is recognized as one of the most important waterfowl wintering areas on the Pacific Flyway for waterfowl. This area has been identified as a key component in the North American waterfowl plan.

Bird Colonies

Most of these species follow the coast during their southward movement; many species winter around these bays, while others stop briefly to rest and feed before continuing their migration to Southern California, Mexico, Central America or South America. During fall and spring migration, as well as winter, large populations of shorebirds and waterfowl inhabit nearshore areas. Consequently, in the event of a spill, certain protective measures may be required to minimize the effect on waterbirds. For example, during a critical spill situation, initial efforts should attempt to repel birds from the site with equipment such as bird canons. Depending on the species involved, some repelling devices will successfully deter individuals from the affected area while others will be ineffective.

Subsequent efforts can be reorganized on the basis of these results. The degree of effectiveness decreases as birds become accustomed to the sound system; this process is referred to as habitation. Activities such as people, boats, and machinery usually are the most effective deterrents.

6.3.3 Eelgrass

Eelgrass meadows in protected bays provide food sources for variety of species within the marine food chain. Additionally, it provides habitat and protection and acts as a nursery for many marine species. In the event of an oil spill near eelgrass meadows, protective measures should be implemented to reduce the impact.

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Measures such as booms may be effective when conditions permit deployment. If placed from shore, minimize trampling and dragging equipment over the habitat. Dispersants may be applied in deeper water where dilution will be rapid. If applied in shallow water, use only in areas with adequate flushing from tidal or wave action. If applied directly over seagrass beds, dispersed oil may impact seagrass and organisms associated with seagrass beds. Herding agents may be used between the oil and shoreline.

For cleanup, natural cleansing is still preferable to most cleanup methods. Manual removal results in the removal of sediments and organisms and should be used in the "wade zone" only. Trampling and dragging of equipment over the habitat should be minimized.

Substrate removal may delay or prevent re-establishment of the original ecosystem and vacuum pumping may result in removal of organisms and sediment. Both methods are not advisable. In intertidal areas, low pressure flushing may be viable. Vegetation cropping should be avoided since it modifies the habitat and may kill important habitat plants.

6.3.4 Inlets, Intakes, Harbors, and Marinas

Inlets, intakes, harbors and marinas are inhabited by a variety of fish, invertebrates, and waterbirds that would be at risk if an oil spill occurs near any of these facilities. Marinas have a great potential for public exposure to hazards and damage claims and should be boomed to exclude oil. Intakes for commercial, industrial and municipal water usage areas are subject to impact due to safety hazards, loss of use and damage claims. Protective measures could include exclusionary booming to prevent or exclude oil from entering these areas. Many of the entrances or channels have tidal currents exceeding 1 knot in the opening. In these cases, booms should be deployed landward from the entrance in quiescent areas. Booms should be placed at an angle to the current to guide oil to an area where it can be recovered.

The deployment of a second boom behind the first may be desirable to contain any oil that escaped under the primary boom.

Diversion booming should be used where the water current in an area is greater than 1 knot or if the areas are too large to boom with available supplies. Diversion booms are deployed at an angle from the shoreline closest to the leading edge of the approaching oil slick to deflect oil toward shore, where pickup of pooled oil is more effective.

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Since the area is predominantly environmentally sensitive, recommended response strategies are to attempt to limit the extent of shoreline fouling and to limit the area covered by the slick to the maximum extent possible. Since oil is the primary product handled, containment booming operations will be initiated. In addition, shoreline protection boom may be utilized in an attempt to prevent fouling of shorelines.

It is also important to recognize that while certain **immediate** environment protection response strategies must be planned for in advance, the ongoing protection and cleanup during a major spill would involve professional input from the company's oil spill advisors and the Federal and State On-Scene Coordinators.

Recreational Areas

Publicly accessible recreation areas generally have good water/shoreline access for logistical purposes.

6.3.5 Salmon and other Spawning Streams

Numerous streams throughout the area have been identified as environmentally sensitive due to the presence of spawning areas for salmon and other species.

The following factors are detrimental to spawning fishes, their nests and eggs:

- Changes in water temperature
- Increased siltation or turbidity
- Increased amount of dissolved gases in the water column
- Physical destruction of habitat by personnel and/or equipment

To reduce the impact of an oil spill and response activities to streams identified as spawning habitat, the following steps would be taken:

- Attempt to contain spilled product as far upstream of spawning areas as possible
- Minimize or eliminate the use of overflow dams
- Minimize the number of personnel working at each response site
- Minimize use of heavy equipment at each response site
- Eliminate warm/hot water flushing tactics at response sites

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6.4 VULNERABILITY ANALYSIS

A vulnerability analysis of the pipeline was preformed to address sensitivities downstream of the pipeline including:

- potentially affected public drinking water intake, lake, river, and stream within a radius of 5 miles
- potentially affected environmentally sensitive area within a radius of 1 mile

The following vulnerability maps identify the aforementioned sensitivities.

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Maps and figures have been redacted in accordance with the FOIA Exemption 7(F).

6.5 WILDLIFE PROTECTION AND REHABILITATION

Major oil spills can adversely impact wildlife that may be in the vicinity of the spill. Olympic recognizes the statutory authority of the Washington Department of Fish and Wildlife in the regulation of the rescue, recovery and rehabilitation of oiled wildlife. Olympic and its contractors will assist under WDFW guidance and in compliance with WAC232-12-275.

Two priority items should be addressed when responding to impacted wildlife:

1. protecting affected habitats using technologies that minimize ecological impacts, and
2. minimizing impacts to exposed resident wildlife through cleaning and rehabilitation efforts.

With few exceptions, most wildlife populations are so large and dispersed that they would not be affected by a single oil spill incident. Other sections in this plan identify means to protect and minimize the impact of a spill on wildlife habitats.

A variety of pre- and post-spill issues should be addressed. These include:

- identification of the potentially affected regional wildlife resources and habitats;
- determination of sensitive species with specific consideration given to threatened and endangered species;
- identification of regulatory and jurisdictional responsibilities as well as lines of authority for key species at risk;
- identification of the appropriate professionals and/or organizations needed for rescue/rehabilitation efforts;
- implementation of steps to care for oiled animals; and
- preparation and implementation of a plan to deal with the media and public concerns.

MSRC and Clean Rivers Cooperative under the direction of IOSA will be called upon to provide for collection, care and rehabilitation support of oil contaminated wildlife under the terms of the cooperative response contract referenced in **Appendix B**.

Millions of birds use coastal areas for breeding and feeding. When spills occur, many birds can become oiled. There are two approaches to waterfowl protection and rehabilitation:

1. relocation of birds from spill sites by use of deterrents, and
2. cleaning and rehabilitation of oiled birds.

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6.5.1 Bird Relocation

Bird relocation can be accomplished using a variety of deterrents to encourage birds to avoid areas of spilled oil. Any deterrents to be employed in suspected waterfowl habitat areas should be done with the advice of Washington Fish and Wildlife staff and in coordination with wildlife refuge officials.

While the use of bird deterrents may be attempted in all bird concentrations, the overall success rate can be low. Furthermore, scaring techniques may result in some bird mortality. Nonetheless, the drawbacks of scaring techniques are usually more acceptable than allowing bird populations to undergo oil contamination.

Results are likely to be best in winter and at feeding areas at sea. Migrating birds may have a strong tendency to return to a contaminated staging area. If scaring is effective, but alternate habitats are not available, some migrating birds may not survive due to the lack of food or other environmental factors. Decisions are the most difficult when attempting to deter birds near a breeding colony away from oil. Caution should be used in terms of distance from birds and frequency in which deterrent techniques are applied. Deterrent application is likely to cause panic among nesting birds, which could result in the loss of eggs or young, and continual deterrence near a bird colony may discourage birds from returning to a breeding site. However, oiled birds are usually unable to raise young successfully, and the death of adult birds is more of a threat to seabird populations than the loss of young birds.

The device and methods associated with wildlife deterrents can be grouped into the following general methods: visual, auditory, and combinations of visual and auditory. The choice of an appropriate method depends on the species involved, the surrounding environment, and the spill situation. In a practical sense, the choice may be based on what is available and the most logical approach to handling a specific situation. General guidelines for selecting bird deterrent methods are as follows:

- where waterfowl and coastal birds are dominate, use exploder and hazing with aircraft to disperse, unless the birds are flightless. Flightless birds (young and molting birds) may need to be herded with boats and/or helicopters.

- where diving birds are dominate, underwater sound (if effective) should probably be used. Some bird species (auklets) are attracted

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to lights while other species (loons, grebes) appear to be herded with boats and/or helicopters.

The following is a general summary of deterrent methods, their effectiveness, and their limitations.

1. Visual Methods

   a. Floating or Stationary Figures: A human effigy has been shown to be an effective method for deterring birds during the daylight hours.

   b. Helium-Filled Balloons: Helium-filled balloons have been used successfully to prevent birds from landing.

2. Auditory

   a. Propane Cannons and AV-Alarms: Bird density reduction (50-100%) and areal extent of effectiveness (150-1,000 m) of propane cannons and AV-alarms have varied by bird species. The devices have been shown to be effective for only short periods of time, 2 to 3 days maximum. The guns are located in oil spill areas in an attempt to temporarily relocate bird populations to safer locations while clean-up operations are completed and a safe habitat is restored. The devices are noted as possibly not being effective for rough, open sea conditions.

   b. Other Noisemakers: The playback of recorded sounds of alarmed birds has been tested and shown to be effective. Furthermore, its effectiveness has been shown to increase when done in conjunction with detonators. A flashing light, along with a detonation cartridge, were found to be ineffective. Shell crackers ignited from land and boats were tested as effective deterrents methods on two spills in the United States.

3. Visual and Auditory

   a. Herding and Hazing with Aircraft: This technique is used for flying waterfowl or waterfowl on the ground that typically fly in response to disturbances. However, herding or hazing with aircraft may cause diving birds to dive into the contaminated area. Helicopters have been effective in herding flightless birds (young or molting birds).

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b. Herding with Boats: Herding with boats, which is slow and labor intensive, may be effective for flightless waterfowl but is ineffective for diving birds. With several boats, birds can be herded overland to inland lakes or boomed areas of lagoons.

4. Other Methods

a. Capture and Relocation: Capture and relocation to another area is an option for small populations of birds of critical sensitivity; however, it is labor intensive and may not be practical in most cases.

b. Electromagnetic Current: There is some evidence that birds are sensitive to low-intensity, alternating-current electro-magnetic fields during nocturnal flights.

c. Chemical Deterrents: Research is under way on how to manufacture chemicals similar to those that plants use to deter birds and other wildlife. While dyes for release near slicks also have been evaluated, no references have been located on this subject.

6.5.2 Cleaning and Rehabilitation

Bird cleaning and rehabilitation programs are necessary to build public support and measure progress for the clean-up operation. Therefore, high priority should be assigned to this endeavor. In the United States migratory waterfowl are protected by federal law. Wildlife agencies must be consulted before handling oiled birds.

Oiled bird rehabilitation is a complex, crisis-oriented endeavor requiring an experienced staff with documented management, medical, and technical skills. Special equipment and medical supplies are necessary. Liability coverage is required as well as an understanding of human health and environmental hazards.
It is recommended that experts such as the International Bird Rescue Research Center (510) 841-9086, located in Berkeley, California, or Tri-State Bird Rescue & Research, Inc., (302) 737-9543, located in Newark, Delaware, be contacted to supervise and support contractor personnel.

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The experts should arrive as soon as possible following a spill to consult with the contractor, federal, and state agencies to help determine priorities and problems. Olympic will maintain a contract with IOSA to assure the minimum amount of time possible in order to prepare for an on-scene wildlife response (usually) 24-48 hours) following an oil spill. Additional services should be requested as needed, including:

1. Response. The wildlife rescue team should work with retrieval personnel (state, federal, or contractor) to discuss retrieval equipment needs, safety hazards, and retrieval methods for handling wild birds.

   The wildlife rescue team should identify and set up a suitable facility. On-scene facilities may, if required, be established as an emergency treatment center. Requirements include: 4,000 square feet for a 200 bird spill, heat, ventilation, controlled access, massive amounts of hot water daily, means for disposal of oily water and purchase or rental of special equipment for medical care, cleaning, and swimming of affected birds. Support from the contractor will be necessary to set up an equip and on-scene rehabilitation facility.

   The wildlife rescue team will need to establish operations control, medical, rehabilitation, and cleaning areas within the facility. The team will supervise rescue staff and will provide medical and rehabilitative care for the oiled birds delivered to the facility.

2. Training. Training will be needed for company, contractor and/or agency personnel to work in an oil spill situation. Experts will advise all people of the extent of hazards and require proof of liability and health insurance.

6.6 CONSIDERATIONS FOR OILED MARINE MAMMALS

Seals, otters, and other marine mammals may be coated with oil if spills occur. Only skilled persons with appropriate training in animal handling should attempt to capture or clean marine mammals that are coated with oil. These animals can kill or inflict serious injury to humans.

These animals are likely to be under stress. Hence, improper handling could increase their mortality rate.

Responsibility for the capture, transport, cleaning, rehabilitation, and release of oiled marine mammals rests with the responsible government agencies. The procedures to be followed during an actual oil spill incident will be subject to

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determination and modification at the discretion of the responsible government agencies. They will, however, consist of the following basic components:

1. If the responsible government agencies decide to conduct offshore capture operations, they will be carried out by teams of State Fish and Wildlife and USFWS personnel. THESE agencies will also direct and participate in onshore capture operations; however, during onshore capture operations they may be accompanied by non-agency personnel. In either case, actual capture operations (i.e., the handling of animals) will be carried out by experienced agency personnel so as to ensure compliance with all applicable federal and state laws and regulations, as well as the safety of the animals and those engaged in capture operations.

2. It may be necessary to transport mammals a number of times during the course of response operations. As with all procedures involving mammals care, transport operations will be supervised by experienced personnel to ensure that operations are conducted in a fashion which minimizes the amount of stress experienced by the animals. Vehicles, aircraft, and/or vessels can be utilized for transport operations. The choice of transportation mode will depend on the availability of the mode, access to the capture site, access to the collection station, distance to be traveled, access to a cleaning/rehabilitation center, the health of the animals, and cost.

3. The cleaning and rehabilitation will be supervised by responsible government agencies and conducted by personnel trained and permitted in wildlife rehabilitation . For each animal, sedation, washing, rinsing, and sedation reversal activities will be necessary. A cleaning team will generally consist of four people (i.e., one person to hold the animal's head, two people to wash and rinse the animal, and one animal care specialist). In addition, a veterinarian will be present to examine animals upon their arrival at the center, administer drugs and medicine, monitor cleaning operations, and observe the animals in the hours following cleaning.

4. Cleaned mammals will be held for rehabilitation if, after cleaning, they cannot be released to a temporary holding facility or their natural environment. The goal of rehabilitation will be returned fully recovered, healthy animals to their natural environment as quickly as possible. During rehabilitation, procedures must be carried out in a way which minimizes stress and avoids, to the maximum extent possible, the acclimation or "imprinting" of animals to human beings. If a pup is found during capture operations and cannot be reunited with its mother, it will be considered orphaned. Orphaned pups will require longer term care and more specialized handling. When caring for a pup, the objective will be to

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mimic the animal's natural environment and behavior as closely as possible.

5. Mammals will be ready for release to their natural environment as soon as the normal physiological state is restored. When an animal appears ready for release, the veterinarian will examine it. If the veterinarian concurs that the animal is ready for release, the responsible government agencies will be notified so that a release "team" can be assembled. Prior to release, an identification tag will be attached to the animal unless it is already wearing one. Also, each animal's file card will be consulted to determine whether the noted area of capture is "free" of oil. If so, the animal will be released at or near the capture point. Animals captured from sites which are still contaminated will be held until these sites are cleaned, or relocated to a clean site.

6.7 PROTECTION/RESPONSE STRATEGIES

Detailed protection and response strategies are contained in the accompanying Geographic Response Plan.

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SUSTAINED RESPONSE ACTIONS

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7.1 RESPONSE RESOURCES

7.1.1 Company Response Equipment

Olympic Pipe Line Company (OPLC) spill response equipment is listed in **FIGURE 7.1** and **FIGURE 7.2**. The equipment is strategically located along the pipeline and is available for responses to both the Olympic Pipeline and the Cherry Point Crude Line to promote a rapid and aggressive response.

The equipment in **FIGURE 7.1** is owned by OPLC, but operated and maintained by NRCES. There are three trailers total with one trailer located in the North, Central, and South areas. The location of each trailer and an overview of its contents can be found in **FIGURE 7.**1. OPLC has a contract with NRCES that provides 24/7 response personnel dedicated to OPLC for the purpose of meeting the 30 minute mobilization and 2 hour response standards for company owned equipment. Under this agreement NRCES has two response personnel and a tow vehicle on-call for each of OPLC's three equipment trailers.

The equipment in **FIGURE 7.2** is owned and operated by OPLC and used to establish initial containment and control within 2 hours of incident location. There are nine trailers found in the following areas: 2 – North Area; 3 – Central Area; 4 – South Area. The location of each trailer and an overview of its contents can be found in **FIGURE 7.2**.

One or more of the trailers can be mobilized to any location along the pipeline within 2 hours to meet the WAC 173-182-365 and Tier 1 response planning standards. Additional contractor equipment is available for responses to any location on the pipeline system to meet the 6, 12, 24 and 48 hour response requirements.

7.1.2 Response Equipment Inspection and Maintenance

The equipment in FIGURE 7.1 is tested, inspected, and inventoried by NRCES response personnel quarterly in accordance with the same equipment maintenance procedures outlined in their approved PRC application. (See equipment inventory in FIGURE 7.3)

The equipment in FIGURE 7.2 is tested, inspected, and inventoried by OPLC personnel quarterly using MAXIMO, a software program that assigns and tracks work orders for field personnel. (See equipment inventory in FIGURE 7.4)

All maintenance records will be kept on file and made available for inspection for a period of 5 years.

FIGURE 7.1 - Olympic Pipe Line Company Spill Response Equipment (operated by NRCES)

LOCATION	CLOSEST MP	TRAILER/TRUCK (AGE)	BOATS (AGE)	PUMPS / SKIMMERS	BOOM
Bayview Products Terminal 14879 Ovenell Road Mt. Vernon, WA 98273	37	20' Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff w/15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' 5" sorbent 200' sorbent sweep 1600' - 12" river 400' - 6" pond
NRCES Milton Office 300 Birch Street Milton, WA 98354	130	20' Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff w/15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' 5" sorbent 200' sorbent sweep 1600' - 12" river 400' - 6" pond
Castle Rock Station 185 Kalmbach Quarry Rd Castle Rock, WA 98611	209	20' Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff w/15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' 5" sorbent 200' sorbent sweep 1600' - 12" river 400' - 6" pond

FIGURE 7.2 - Olympic Pipe Line Company Spill Response Equipment (operated by OPLC)

LOCATION	CLOSEST MP	TRAILER	BOATS	BOOM
Cherry Point Station 4476 Aldergove Rd. Ferndale, WA 98248	2.5	8' Response Trailer	N/A	120' – 5" sorbent
Bayview Products Terminal 14879 Ovenell Road Mt. Vernon, WA 98273	37	12' Response Trailer	12' Livingston w/15hp o/b	120' – 5" sorbent
Renton Station 2319 Lind Avenue SW Renton, WA 98055	112	12' Response Trailer	12' Livingston w/15hp o/b	120' 5" sorbent 150' – 12" river 40' – 6" pond
Renton Station 2319 Lind Avenue SW Renton, WA 98055	112	8' Response Trailer	N/A	120' – 5" sorbent
Woodinville Station 21909 45th Ave S.E. Bothell, WA 98011	112	8' Response Trailer	N/A	120' – 5" sorbent
Olympia Junction 11710 Vail Cut-off Road Rainier, WA 98576	165	8' Response Trailer	N/A	120' – 5" sorbent 100' – 12" river 40' – 6" pond
Castle Rock Station 185 Kalmbach Quarry Rd Castle Rock, WA 98611	209	12' Response Trailer	12' Livingston w/15hp o/b	120' – 5" sorbent 150' – 12" river 40' – 6" pond
Vancouver Delivery Facility 2215 Saint Francis Lane Vancouver, WA 98660	253	8' Response Trailer	N/A	120' – 5" sorbent 100' – 12" river 40' – 6" pond
Portland Delivery Facility 9420 NW St. Helens Road Portland, OR 97231	258	12' Response Trailer	N/A	120' – 5" sorbent 150' – 12" river 40' – 6" pond

FIGURE 7.3 – Spill Response Trailer Inventory (NRCES)

OLYMPIC PIPE LINE COMPANY			
RESPONSE TRAILER INVENTORY FORM			
Trailer Description	Wells Cargo		
Trailer Length:	20'		
Type of Equipment	**Specifications**	**On Hand**	**Unit**
Boom	river 12"	1600	ft
	pond 6"	400	ft
	sorbent	200	ft
Dam Building Materials	PVC pipe (8"x8')	3	ea
	visqueen	1	roll
	metal posts	12	ea
	rope - 1/2"	3	600' roll
Misc tools	Shovel - round	1	ea
	Pitch Fork	1	ea
	fence post driver	1	ea
	Weed eater	1	ea
	chain saw	1	ea
Hand Tools	Tool box	1	ea
	utility knife	1	ea
	claw hammer	1	ea
	ball peen hammer	1	ea
	handsaw	1	ea
	hacksaw w/blades	1	ea
	pipe wrench	1	ea
	adjustable wrench	1	ea
	channel lock pliers	1	ea
	lineman pliers	1	ea
	slipjoint pliers	1	ea
	screwdriver	1	ea
	flashlight	1	ea
	duct tape	2	100' roll
PPE/Safety/Decon Equip	first aid kit	1	ea
	safety goggles	1	ea
	eye wash exp. date	1	ea
	rubber gloves	2	pr
	rubber boots (steel toe)	2	pr
	hard hats	2	ea
	rain gear	2	set
Recovery Equipment	pump - size/type: 2" yanmar diesel	1	ea
	skimmer - type: skimpak 4200	1	ea
	suction/discharge hose (size 2 ")	80/100	ft
	diesel fuel can (2 gal) w/funnel	1	ea
	gasoline fuel can (2 gal) w/funnel	1	ea
	misc cam lock fittings	1	box
Boats/motors	V bottom boat 12'	1	ea
	motor - 15hp 2stk outboard	1	ea
	oars	1	ea
	bumpers	0	ea
	boat gas tank	1	ea
	air horn	1	ea

FIGURE 7.4 – Spill Response Trailer Inventory (OPLC)

OLYMPIC PIPE LINE COMPANY							
RESPONSE TRAILER INVENTORY							
Type of Equipment	Specifications	12' - w/ Boat Central/South Area	12' - w/Boat North Area	8' - South Area	8' - North/Central Area	12' - w/o boat	Unit
		On Hand					
Boom	River 12"	150	0	100	0	150	ft
	Pond 6"	40	0	40	0	40	ft
	Sorbent 5"	120	120	120	120	120	ft
	Anchors	1	0	1	0	1	ea
	Floats	2	0	2	0	2	ea
	Buoy	2	0	2	0	2	ea
	Telescoping boat hook	1	0	1	1	1	ea
	Ascenders (for pulling rope)	2	0	2	2	2	ea
	3/8" Shackles	10	0	10	0	10	ea
	Floating Buoy Lights	2	0	2	0	2	ea
	Boom Quick release pins	15	0	15	0	15	ea
Boats / Motors	Boat	1	1	N/A	N/A	N/A	ea
	motor / outboard	1	1	N/A	N/A	N/A	ea
	oars	2	0	N/A	N/A	N/A	ea
	paddle	1	1	N/A	N/A	N/A	ea
	Bumpers	2	2	N/A	N/A	N/A	ea
	Dock Lines	2	2	N/A	N/A	N/A	ea
	Anchor	1	1	N/A	N/A	N/A	ea
	Boat Gas tank (Metal)	1	1	N/A	N/A	N/A	ea
	Boat plugs	2	2	N/A	N/A	N/A	set
	Flares, Flashlights (Visual Distress)	1	1	N/A	N/A	N/A	ea
	PFDs (Large, X-Large)	2	2	N/A	N/A	N/A	ea
	Throwable Life Preserver	1	0	N/A	N/A	N/A	ea
	Air horn	1	1	1	1	1	ea
Dam Building Materials	PVC Pipe (4"x8')	3	3	3	3	3	ea
	PVC Pipe (4"x6')	3	3	3	3	3	ea
	Sandbags	100	100	100	100	100	ea
	Visqueen	1	1	1	1	1	roll
	Chicken wire	1	1	1	1	1	roll
	Metal "T" post (6ft)	10	10	10	10	10	ea
	rope 1/2"	1	1	1	1	1	reel
	rope 3/8"	1	1	1	1	1	reel
	wooden stakes	1	1	1	1	1	bundle
	5' rebar	10	10	10	10	10	ea

Sustained Response Actions

Dam Building Materials	post clips (on top of rebar)	1	1	1	1	1	bag
	binder twine	1	1	1	1	1	spool
Misc Tools	Machete	1	0	1	0	1	ea
	Pulley Block and tackle	1	1	1	1	1	ea
	Shovel (Round)	1	1	1	1	1	ea
	Shovel (Square)	1	1	1	1	1	ea
	Pitch Fork	1	0	1	0	1	ea
	Rake	1	1	1	1	1	ea
	Dig bar 6'	1	1	1	1	1	ea
	Sledge Hammer	1	1	1	1	1	ea
	fence post driver	1	1	1	1	1	ea
	Lopping Shears	1	1	1	1	1	ea
	push broom	1	1	1	1	1	ea
	2 wheel cart	1	1	1	1	1	ea
	Pick / mattock	1	1	1	1	1	ea
Hand Tools	Tool Box	1	1	1	1	1	ea
	Utility Knife	1	1	1	1	1	ea
	Claw Hammer	1	1	1	1	1	ea
	Handsaw	1	1	1	1	1	ea
	Bow saw	1	1	1	1	1	ea
	Hacksaw with Blades	1	1	1	1	1	ea
	Adjustable Wrench 12"	2	2	2	2	2	ea
	channel lock pliers	2	2	2	2	2	ea
	lineman pliers	1	1	1	1	1	ea
	slip joint pliers	1	1	1	1	1	ea
	screwdriver set (Phillips/flat)	3	3	3	3	3	ea
	flashlight (D size)	1	1	1	1	1	ea
	Batteries "D" size	4	4	4	4	4	ea
	Batteries "AAA" size	8	8	8	8	8	ea
	Duct Tape	1	1	1	1	1	roll
	electrical tape	2	2	2	2	2	roll
	nails	1	1	1	1	1	box
	staple gun w/ staples	1	1	1	1	1	ea
	tie wire	100	100	100	100	100	ft
	Zip Ties (Misc sizes)	1	1	1	1	1	bag
	wire brush	1	1	1	1	1	ea
	vice grips	1	1	1	1	1	ea
PPE/Safety/Decon Equip	First Aid Kit	1	1	1	1	1	ea
	Safety Goggles	2	2	2	2	2	ea
	Safety Glasses	6	6	6	6	6	ea
	Eye Wash 32 fl Oz	1	1	1	1	1	ea
	rubber gloves	4	4	4	4	4	pr
	Non-Latex rubber gloves (Large, XL)	2	2	2	2	2	box
	hard hats	2	2	2	2	2	ea

PPE/Safety/Decon equip	rain gear	2	2	2	2	2	set
	tyvek suits XL	4	4	4	4	4	ea
	tyvek suits XXL	4	4	4	4	4	ea
	life jackets (work vest)	6	6	2	2	2	ea
	life jackets (PFD)	2	2	2	2	2	ea
	Seat cushion (PFD)	2	2	2	2	2	ea
	High Vis traffic vest (XL)	7	7	7	7	7	ea
	High Vis traffic vest (3XL)	3	3	3	3	3	ea
	Large dish pans (Rubbermaid totes)	2	2	2	2	2	ea
	liquid soap - 32 oz	1	1	1	1	1	ea
	scrub brush	2	2	2	2	2	ea
	5 gallon bucket	1	1	1	1	1	ea
	Garbage bags	1	1	1	1	1	box
	sorbent pads	400	400	400	400	400	ea
	Visqueen spill bags	1	1	1	1	1	roll
	Rags	1	1	1	1	1	bag
	traffic cones	8	8	8	8	8	ea
	fire extinguisher (5lb)	1	1	1	1	1	ea
	danger tape	1	1	1	1	1	roll
	caution tape	3	3	3	3	3	roll
	Halogen light tower	1	1	1	1	1	ea
	hand cleaner	1	1	1	1	1	ea
	wheel chocks	2	2	2	2	2	pr
	traffic triangle	1	1	1	1	1	set
	Signs (slow, stop)	2	2	2	2	2	ea
	Floating rescue rope/lifeline	2	2	2	2	2	ea
	Tarps	1	1	1	1	1	ea
	Windsock	1	1	1	1	1	ea
Other	Gas can	1	1	N/A	N/A	N/A	ea
	Storage- 33 gal trash can	1	1	1	1	1	ea
	Folding chairs	2	2	2	2	2	ea
	folding canopy 10' X 10'	1	1	1	1	1	ea
	Folding table	1	1	1	1	1	ea
	DOT magnet	2	2	2	2	2	ea
	Field Document	1	1	1	1	1	ea
	Inspection Record book	1	1	1	1	1	ea

7.1.3 Contracts, Contractor Equipment and Manpower

OPLC's primary response contractors and other companies who provide spill response services are listed in **FIGURE 3.5**. OPLC 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. The primary response contractors are geographically distributed to provide materials, equipment and manpower in a timely manner even in the unlikely event of simultaneous oil spills.

APPENDIX B contains contracts for the primary response contractors. The primary response contractors are USCG certified Oil Spill Removal Organizations (OSROs). The OSROs maintain contracts with additional companies so that sufficient equipment and personnel are available in overlapping areas of operation. Equipment lists can be found at www.wrrl.us.

In the event that non-dedicated spill response resources are required to respond to an incident, OPLC will first utilize its OSRO contractors to source and acquire the needed equipment through established cooperative agreements. If the equipment can not be obtained by the OSROs within 48 hours, OPLC will request assistance from the BP Business Support Team (BST) that is established to address business resourcing issues during an emergency.

7.1.4 Communications Equipment

Day-to-day OPLC communications are conducted via landline telephones and mobile phones. Additional communications equipment (e.g. handheld VHF-FM radios, pagers, and fax machines) may be provided by OPLC or leased from a communications company in the area. Communication with contractors and local, federal, and state agencies can be conducted via mobile phone and/or VHF-FM radios. Equipment lists are provided in **APPENDIX B**. Refer to **FIGURE 7.5** for communications guidelines.

FIGURE 7.5 - Communications Checklist

Communications Checklist	Initials	Date & Time Started	Date & Time Completed
Develop 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: • 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.

7.1.5 Command Post

OPLC will establish and maintain a Command Post during a spill event. Additional Tactical Command Post(s) (TCP) may be set up in the vicinity, as needed. To establish a suitable Command Post, utilize the checklist in **FIGURE 7.6**.

A pre-screened list of hotels that meet size and amenity requirements for a Command Post are listed in **Figure 7.7**.

FIGURE 7.6 - 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 availability 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			

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

FIGURE 7.7 – Command Post Locations

Name	Address	Driving Directions
Best Western Lakeway Inn	714 LAKEWAY DRIVE Bellingham, WA 98229 (360) 671-1011	FROM INTERSTATE 5 NORTH - USE EXIT 253 LAKEWAY DRIVE. TURN RIGHT AT THE STOP SIGN ONTO KING STREET. TAKE A RIGHT ONTO LAKEWAY DRIVE AT THE STOPLIGHT. THE BEST WESTERN LAKEWAY INN ENTRANCE IS THE FIRST DRIVEWAY ON THE LEFT.
Holiday Inn Everett	3105 PINE STREET Everett, WA 98201 (425) 339-2000	FROM NORTH - I-5 NORTH TO EXIT 193. LEFT ON PACIFIC AVENUE. LEFT ON PINE STREET.
Hyatt Regency, Bellevue	900 Bellevue Way NE, Bellevue, WA 98004 (425) 462-1234	FROM 405 NORTH – BELLEVUE EXIT NE 8TH STREET WEST. HOTEL IS ON 8TH STREET NE AND BELLEVUE WAY.
Embassy Suites Tukwila	15920 W VALLEY ROAD Tukwila, WA 98188 (425) 227-8844	FROM I-5 EXIT I-405 /NORTH TAKE EXIT 1 /WEST VALLEY HIGHWAY/ AND TRAVEL 2 BLOCKS SOUTH TO THE HOTEL. HOTEL IS LOCATED AT SOUTHEAST CORNER OF WEST VALLEY HIGHWAY AND LONGACRES WAY.
Red Lion Olympia	2300 EVERGREEN PARK DR Olympia, WA 98502 360-943-4000	INTERSTATE 5 NORTH OR SOUTHBOUND TAKE EXIT 104 HWY 101. FROM HIGHWAY 101, TAKE THE FIRST EXIT - CROSBY BOULEVARD / COOPER POINT ROAD. TURN RIGHT ONTO COOPER POINT ROAD. TURN RIGHT ON EVERGREEN PARK DRIVE AND THE RIGHT ON SOUTH EVERGREEN PARK DRIVE. TURN RIGHT INTOMORRIS BUSINESS PARK AT LAKERIDGE WAY, STRAIGHT TO THE HOTEL.
Hilton Vancouver	301 W 6TH STREET Vancouver, WA 98660	SOUTH ON INTERSTATE 5- TAKE INTERSTATE 5 INTO VANCOUVER- WASHINGTON. TAKE THE CITY CENTER EXIT /1C/. TURN RIGHT ONTO MILL PLAIN BLVD. -BECOMES 15TH ST- TURN LEFT ONTO COLUMBIA ST. HOTEL IS ON THE SW CORNER OF 6TH AND COLUMBIA

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 OPLC's public response. Information in this section includes:

- Guidelines for dealing with the media,
- Incident Fact Sheet, and
- List of Potential Questions

GUIDELINES FOR DEALING WITH THE MEDIA

- You as a company manager are the most logical person for reporters to seek out for information.

- If you don't answer the reporters' questions, they will look elsewhere to find out what happened. 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 (i.e. one hour, etc.).

- 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.

DO PROVIDE:

- A brief, general description of what happened.
- Number of injured or killed, if known.
- Steps being taken to handle the emergency.

DON'T PROVIDE:

- Names of deceased or seriously injured employees until the next of kin have been notified.
- Speculation about the cause of the emergency.
- Any statement implying personal or company negligence.
- Cost estimates of damage.

OTHER CONSIDERATIONS:

- Safety considerations should always receive priority in determining access to company property.

- **Anticipate likely questions:**

  There are only six questions that can be asked about any subject: Who, What, When, Where, Why and How.

- **Keep answers short and understandable. Answer only the question that is asked by the reporter.**

- **Give the most important facts first.**

- **Talk to the public's concern about the incident.**

  Are there deaths or injuries, is there an immediate threat to the public. Is there any danger of explosion, is the fire under control, can it be controlled?

- **If you don't know the answer to a question, don't be afraid to say "I don't know".**

  Make note of the question and tell the reporter that you will try to get the answer for him - then do it.

- **Don't be defensive.**

- **There is no such thing as "Talking off the record".**

  Assume that anything and everything you say to a reporter is going to be printed or used in the story.

- **Avoid "What If" or speculative questions.**

  These questions should be answered with a restatement of the problem and what is being done to control it.

- **Don’t speculate about the cause of the incident.**

- **Don’t minimize the situation.**

FIGURE 7.8 - 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_____

How/Where being treated_____

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 _____

FIGURE 7.9 - List of Potential Questions

Questions

1. How big is the spill?(approximately) _____

2. How did it happen? _____

3. When did it happen? Date: _____ Time: _____

4. What is Olympic doing to clean up the spill and prevent other spills? _____

_____

_____

_____

5. What if the spill hit the beach, residential or recreational areas, or environmentally sensitive areas? _____

_____

_____

6. Is the material hazardous and/or toxic? _____

7. Has any fish or wildlife been affected? _____

_____

8. What was the last occurrence of this nature? _____

_____

9. What is Olympic's environmental policy?

_____

_____

_____

SECTION 8
DEMOBILIZATION / POST-INCIDENT REVIEW

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8.1 EQUIPMENT DEMOBILIZATION

Demobilization is one of the areas that the Company can significantly reduce costs with proper planning. Therefore, emphasis must be placed on establishing efficient demobilization procedures. A Demobilization Checklist is contained in **FIGURE 8.1**. A Demobilization Plan is included in **FIGURE 8.2**.

FIGURE 8.1 - 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 Disposal Plan			
Identify shipping needs			
Identify personnel travel needs			
Develop impact assessment and statements			
Obtain concurrence of Planning and Operations prior to release of personnel or equipment			

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FIGURE 8.2 - DEMOBILIZATION PLAN

Incident Name:_____ **Plan Location:**_____

Effective Date of Plan: _____ **Effective Time Period of Plan:**_____

Spill Location: _____ **Plan Prepared By:**_____

1. Demobilization Procedures

- Staging Area Manager will determine which resources are ready for release from a specific collection site. The Staging Area Manager will provide guidance on release priorities and demobilization recommendations. Information maintained by the Situation Unit Leader will be utilized to assist in the prioritization.

- Each collection site 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.

- Staging Area Manager will document all demobilization and decontamination activities.

- Equipment designated for re-assignment will be mobilized to the appropriate staging area.

- The Staging Area Manager will maintain a log documenting that proper decontamination procedures were performed for each piece of equipment.

- The Operations Section Chief will ensure that redeployed personnel receive proper rest prior to their return to duty. The Staging Group Leader will monitor personnel redeployment activities to ensure number of hours worked is within acceptable guidelines.

- The Operations Section Chief must approve demobilization plans prior to decontamination, release, or redeployment of any resources.

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8.2 POST INCIDENT REVIEW

All facility personnel involved in the incident shall be debriefed (by the Planning Section Chief) within two weeks after termination of operations. A standard debriefing form is provided in **FIGURE 8.3**. The primary purpose of the post-spill review is to identify actual or potential deficiencies in the Plan and determine the changes required to correct the deficiencies. The post-spill 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-spill review.

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FIGURE 8.3 - STANDARD DEBRIEFING FORM

Name of Incident: _____

Date: _____

PERSONNEL DEBRIEFED

Name:_____

Normal Duty:_____

Summary of duties performed during incident (list date, time, and location):_____

_____

_____

_____

_____

_____

Positive aspects of the response:

_____

_____

_____

_____

Aspects of the response which could be improved:

_____

_____

_____

_____

Name:_____

Title:_____

Signature:_____

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8.2.1 Final Spill Cleanup Report

A final, comprehensive report shall be prepared by the Incident Commander or his designee after completion of spill cleanup activities for internal use. It should be written in the narrative form, including all appropriate information listed below:

1. Time, location, and date of discharge.

2. Type of material discharged.

3. Quantity discharged (indicate volume, color, length and width of slick, and rate of release if continuous).

4. Source of spill (tank, flowline, etc.) in which the oil was originally contained, path of discharge, and impact area.

5. Detailed description of what actually caused the discharge and actions taken to control or stop the discharge.

6. Description of damage to the environment.

7. Steps that Company or contractors took to clean up the spilled oil, and dates and times steps were taken.

8. The equipment used to remove the spilled oil, dates, and number of hours equipment was used.

9. 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.

10. Actions by the Company or contractors to mitigate damage to the environment.

11. Measures taken by the Company or contractors to prevent future spills.

12. 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.

13. Description of the effectiveness of equipment and cleanup techniques and recommendations for improvement.

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14. The names, addresses, and titles of people who played a major role in responding to the event.

15. 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.

16. All other relative information.

17. A final signature as follows:

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

Name:_____

Title:_____

Signature:_____

Date:_____

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APPENDIX A
TRAINING AND EXERCISES

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A.1 EXERCISE REQUIREMENTS AND SCHEDULES

Olympic Pipe Line Company participates in the National Preparedness for Response Exercise Program (PREP) in order to satisfy the exercise requirements of the EPA, PHMSA, WDOE and ODEQ. A listing of all exercise requirements to be completed within the three year (triennial) cycle is listed in **FIGURE A.1**. Additional information may be found in WDOE Publication No. 98-251, Designing and Conducting Oil Spill Drills. The HS&E District Coordinator is responsible for scheduling, maintaining records, implementing and evaluating this drill program, and ensuring that post-drill evaluation improvements are implemented.

FIGURE A.1 - PREP RESPONSE PLAN CORE COMPONENTS

CORE COMPONENTS	DESCRIPTION
1. Notifications	Test the notifications procedures identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
2. Staff Mobilization	Demonstrate the ability to assemble the spill response organization identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
3. Ability to Operate Within the Response Management System Described in the Plan:	
• Unified Command	Demonstrate the ability of the spill response organization to work within a unified command.
• Response Management System	Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.
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 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 team organization to protect the environmentally and economically sensitive areas identified in the Area Contingency Plan 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.

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FIGURE A.2 - EXERCISE REQUIREMENTS

EXERCISE TYPE	EXERCISE CHARACTERISTICS
Facility/QI Notification	• Conducted quarterly • HS&E District Coordinator initiates mock spill notification to QI • HS&E District Coordinator documents time/date of notification, name and phone number of individual contacted • Document in accordance with form in **FIGURE A.3**
Equipment Deployment	• Conducted semiannually • Response contractors listed in SRP must participate in annual deployment exercise • Document in accordance with form in **FIGURE A.3**
SMT Tabletop	• Conducted annually • Tests IMT's response activities/responsibilities • Documents plan's effectiveness • Reviews ICS organization and forms • 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.3**
Unannounced	• Company will either participate in unannounced tabletop exercise or equipment deployment exercise on an annual basis, if selected • Company may take credit for participation in government initiated unannounced drill in lieu of drill required by PREP guidelines • Plan holders who have participated in a PREP government-initiated unannounced exercise will not be required to participate in another one for a least 36 months from the date of the exercise.
Area	• An industry plan holder that participates in an Area Exercise would not be required to participate in another Area Exercise for a minimum of six years.
OTHER EXERCISE CONSIDERATIONS	
Drill Program Evaluation Procedures	• Company conducts post-exercise meetings to discuss positive items, areas for improvement and to develop action item checklist to be implemented later
Records of Drills	• Company will maintain exercise records for five years following completion of each exercise • Records will be made available to EPA, PHMSA, WDOE, ODEQ and other applicable agencies upon request • 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.)

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FIGURE A.3 - EMERGENCY RESPONSE/EXERCISE FORM

Retain this form for a minimum of 3 years (for USCG/PHMSA/MMS) and 5 years (for EPA)

1. Date(s) preformed:_____

2. ☐ Exercise ☐ Actual Spill

   If exercise:
   ☐ Announced ☐ Unannounced ☐ Deployment ☐ Notification ☐ Tabletop

   If exercise, frequency:
   ☐ Quarter ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th ☐ Annual

3. Location of exercise/spill:_____

4. Time started:_____ Time completed:_____

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

6. Describe how the following objectives were exercised:

   Response team's knowledge of oil-spill response plan:

	Yes	No
Conduct briefing meeting	☐	☐
Establish Incident Command Post	☐	☐
Confirm source was stopped	☐	☐
Develop Site Safety Plan	☐	☐
Prepared ICS 201	☐	☐
Established Work Zones and perimeter Security	☐	☐
Develop Short Range Tactical Plan	☐	☐
Develop Long Range Tactical Plan	☐	☐

   Proper notifications:

Renton Control Center	☐	☐
Notification to Qualified Individual	☐	☐
Name of person notified:_____		
Designated QI in SRP	☐	☐
Time initiated:_____		
Time QI responded:_____		
Production Superintendent	☐	☐
EH&S Department	☐	☐
Release Incident Report Completed	☐	☐
Notification to Agencies Completed (Attach Log)	☐	☐

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FIGURE A.3 - EMERGENCY RESPONSE/EXERCISE FORM, CONTINUED

Transportation/Communications system:

	Yes	No
Establish Primary/Secondary Communication system	☐	☐

Primary: Cellular Phone ☐ Two Way Radio ☐ Land Telephone Line ☐
Secondary: Cellular Phone ☐ Two Way Radio ☐ Land Telephone Line ☐
☐ Other_____

Motor vessel deployed	☐	☐

Provide name:_____

Helicopter/Sea plane deployed	☐	☐

Call sign:_____

Describe function (i.e., transportation, surveillance, dispersant application)_____

Ability to access contracted Oil Spill Removal Organizations (OSROs):

Who contacted – (Name of individual and OSRO):_____
When contacted:_____
Response time projection for deployment_____
Type and amount of containment used_____

	Yes	No
Spilled material recovered	☐	☐
Spilled material disposed	☐	☐

Where?_____
_____
_____
_____

Incident Management Team's ability to coordinate spill response with On-Scene Coordinator, State and applicable agencies:

	Yes	No
Was regulatory on-scene coordinator(s) conducted	☐	☐

List person and agency represented:
_____
_____
_____
_____

Incident Management Team's ability to access sensitive site and resource information in the area Contingency Plan:

	Yes	No
Was pre-impact assessment conducted?	☐	☐
Were pre-impact samples taken?	☐	☐
Were pre-impacted photographs taken?	☐	☐
Were NRDA Specialists mobilized?	☐	☐

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FIGURE A.3 - EMERGENCY RESPONSE/EXERCISE FORM, CONTINUED

		Yes	No
7.	Any deficiencies identified:	☐	☐
	If yes, changes implemented?	☐	☐

If no, why were changes not implemented:

_____

_____

_____

_____

_____

LESSONS LEARNED	PERSON RESPONSIBLE FOR FOLLOW-UP OF CORRECTIVE MEASURES

_____
Certifying Signature

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A.2 TRAINING PROGRAM

The following table lists training requirements for spill responders:

TRAINING TYPE	TRAINING CHARACTERISTICS
Training in Use of Oil Spill Plan	• Field personnel will be trained to properly report/monitor spills • Plan will be reviewed annually with all employees and contract personnel • The Personnel Response Training Activities Log is located in **FIGURE A.6** • Field Document Training Log is provided in **FIGURE A.7**
OSHA Training Requirements	• Company responders designated in Plan must have 24 hours of initial spill response training • Laborers having potential for minimal exposure must have 24 hours of initial oil spill response instruction and 8 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 operators/general laborers plus 8 hours of specialized hazardous waste management training • Managers/employees require 8 hours of annual refresher training • Hazwoper Emergency Response Levels provided in **FIGURE A.8**
Spill Management Team Personnel Training	• See recommended PREP Training Matrix (**FIGURE A.4**)
Training for Casual Laborers or Volunteers	• Company will not use casual laborers/volunteers for operations requiring HAZWOPER training
Wildlife	• Only trained personnel with permits issued by USFWS and appropriate state agency will be used to treat oiled wildlife
Training Documentation and Record Maintenance	• Training activity records will be retained five years for all personnel following completion of training • Company will retain training records indefinitely for individuals assigned specific duties in Plan • Training records will be retained at each facility or pipeline office. HS & E Manager will document all applicable training.

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FIGURE A.4 - TRAINING PROGRAM MATRIX

(Based upon the Training Reference for Oil Spill Response-USCG, PHMSA, EPA, MMS, 1994)

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	INCIDENT MANAGEMENT TEAM (IMT)	FACILITY PERSONNEL
Captain of the Port (COTP) Zones or Environmental Protection Agency (EPA) regions in which the facility is located.	X	X	X
Notification procedures and requirements for facility owners or operators; internal response organizations; federal and state agencies; and contracted oil spill removal organizations (OSROs) and the information required for those organizations.	X	X	X
Communication system used for the notifications.	X	X	X
Information on the products, stored, used, or transferred, by the facility, including familiarity with the material safety data sheets, special handling procedures, health and safety hazards, spill and fire fighting procedures.	X	X	X
Procedures the facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with internal or external cargo transfers, storage, or use.	X		X
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or prevent an oil discharge.	X	X	X
The process for the identification, prioritization and activation of Olympic and NWACP Geographic Response Plans	X	X	X
Operational capabilities of the contracted OSRO's to respond to the following:	X	X	X
Responsibilities and authority of the Qualified Individual as described in the facility response plan and company response organization.	X	X	X
The organizational structure that will be used to manage the response actions including: • Command and control; • Public information; • Safety; • Liaison with government agencies; • Spill response operations; • Planning; • Logistics support; and • Finance.	X	X	X

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FIGURE A.4 - TRAINING PROGRAM MATRIX, CONTINUED

(Based upon the Training Reference for Oil Spill Response-USCG, PHMSA, EPA, MMS, 1994)

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	INCIDENT MANAGEMENT TEAM (IMT)	FACILITY PERSONNEL
The responsibilities and duties of each oil spill management team within the organizational structure.	X	X	
The drill and exercise program to meet federal and state regulations as required under OPA.	X	X	X
The role of the Qualified Individual in the post discharge review of the plan to evaluate and validate its effectiveness.	X		
The Olympic Spill Response Plan, its content and company specific resources and procedures for spill response.	X	X	X
The Northwest Area Contingency Plan (NWACP), its content and use as a resource and standard for spill response..	X	X	X
The National Contingency Plan (NCP).	X	X	X
Roles and responsibilities of federal and state agencies in pollution response.	X	X	X
Available response resources identified in response plan.	X	X	
Contracting and ordering procedures to acquire oil spill removal organization resources identified in the response plan.	X	X	
OSHA requirements for worker health and safety (29 CFR 1910.120).	X	X	X
Incident Command System/Unified Command System.	X	X	
Public Affairs.	X	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 response plan for members of the spill management team		X	
Procedures for the post discharge review of the plan to evaluate and validate its effectiveness.		X	

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FIGURE A.4 - TRAINING PROGRAM MATRIX, CONTINUED

(Based upon the Training Reference for Oil Spill Response-USCG, PHMSA, EPA, MMS, 1994)

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	INCIDENT MANAGEMENT TEAM (IMT)	FACILITY PERSONNEL
Basic information on spill operations and oil spill clean-up technology including: • Oil containment; • Oil recovery methods and devices; • Equipment limitations and uses; • Shoreline clean-up and protection; • Spill trajectory analysis; • Use of dispersants, in-situ burning, bioremediation; and • Waste storage and disposal considerations.		X	
Hazard recognition and evaluation.		X	
Site safety and security procedures.		X	
Personnel management, as applicable to designated job responsibilities.		X	
Procedures for directing the deployment and use of spill response equipment, as applicable to designated job responsibilities.			
Specific procedures to shut down affected operations.			X
Procedures to follow in the event of discharge, potential discharge, or emergency involving the following equipment or scenarios: • Tank overfill; • Tank rupture; • Piping or pipeline rupture; • Piping or pipeline leak, both under pressure or not under pressure, if applicable; • Explosion or fire; • Equipment failure; and • Failure of secondary containment system.			X
Name of the Qualified Individual and how to contact him or her.			X

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FIGURE A.5 - IMT TRAINING MATRIX

UNIT NAME/ RESPONSE SKILL	INCIDENT COMMAND SYSTEM ORIENTATION	SECTION – SPECIFIC TRAINING	ANNUAL EXERCISE	HAZWOPER 24 HOUR ON-SCENE IC
FREQUENCY	**ONCE**	**ANNUAL**	**ANNUAL**	**REFRESHER - ANNUAL**
COMMAND STAFF				
Incident Commander	X	X	X	X
Safety Officer	X	X	X	X
Liaison Officer	X	X	X	X
Information Officer	X	X	X	X
OPERATIONS SECTION				
Section Chief - Operations	X	X	X	X
Recovery and Protection Branch	X	X	X	X
Air Operations	X	X	X	X
Staging Area Manager	X	X	X	X
Wildlife Unit	X	O	O	X
Emergency Response Unit	X	O	O	X
PLANNING SECTION				
Section Chief - Planning	X	X	X	O
Resource Unit	X	X	X	O
Situation Unit	X	X	X	O
Environmental Unit	X	X	X	X
Documentation Unit	X	X	X	O
Demobilization Unit	X	O	O	
Display Processor	X	O	O	
LOGISTICS SECTION				
Section Chief – Logistics	X	X	X	O
Service Branch	X	X	X	
Support Branch	X	X	X	
Communications Unit	X	X	X	
FINANCE SECTION				
Section Chief - Finance	X	X	X	
Time	X	O	O	
Procurement	X	O	O	
Compensation/Claims	X	O	O	
Cost	X	O	O	

X = REQUIRED TRAINING
O = RECOMMENDED

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FIGURE A.6 - PERSONNEL RESPONSE TRAINING LOG

NAME	2002:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:	2003:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:	2004:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:

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FIGURE A.7 - FIELD DOCUMENT TRAINING LOG

NAME	2002				2003				2004			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q

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FIGURE A.8 - HAZWOPER EMERGENCY RESPONSE LEVELS

LEVEL	DESCRIPTION
1	**Witness** or **discoverer** of a spilled product discharge; sole emergency response responsibility is to notify the Incident Commander. Training Requirement: Sufficient to demonstrate Competency at position.
2	**First responders** who respond to releases as part of the initial response effort; trained to respond within a defensive manner (i.e. booming to contain the release and prevent it from spreading), but not to stop the release. **Training Requirement:** HAZWOPER First Responder Awareness Level **Frequency:** Annual **Time Estimate:** 8+ hrs **Employees Required to be Trained:** Individuals who are likely to witness or discover a hazardous material release and who have been trained to initiate an emergency response sequence by notifying the appropriate authorities. OSHA 1910.120(e), (g)(6)(l) Competencies: • Understand what hazardous substances are, and the risks associated with them in an incident • Understand the potential out come associated with an emergency created when hazards substances are present • Recognize the presence of hazardous substances in an emergency. • Identify the hazardous substances, if possible • Understand the role of the first responder awareness individual in the Company's emergency response plan including site security and control and the U.S. Department of Transportation's (DOT) Emergency Response Guidebook • Realize the need for additional resources, and to make appropriate notifications
3	**Hazardous materials technicians** trained to aggressively stop the release; these individuals plug, patch, or otherwise block the release of product at the source. **Training Requirement:** HAZWOPER Hazardous Material Technician Level **Frequency:** Initial **Employees Required to be Trained:** Individuals Who respond to hazardous material releases or potential releases for the purpose of stopping the release. (OSHA 29 CFR 1910.120) **Competencies:** • Meet requirements for First Responder; • Implement of emergency plans; • Classify, identify, and verify hazardous material using field survey equipment; • Function an assigned role in the Incident Command System; • Hazard and risk assessment techniques; • Advance control, containment, or confined operations (within capacities of resources and the PPE available; • Decontamination procedures; • Termination procedures;

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FIGURE A.8 - HAZWOPER EMERGENCY RESPONSE LEVELS, CONTINUED

LEVEL	DESCRIPTION
	• Basic chemistry and toxicology terminology and behavior; • Select and use proper specialized chemical PPE provided to hazardous material technicians.
4	**Hazardous materials specialists** trained to have specific knowledge of hazardous releases and substances, manage spill cleanup operations, and act as liaisons with governmental authorities. **Training Requirement:** HAZWOPER On Scene Incident Commander Level **Frequency:** Initial **Time Estimate:** 24+ hrs **Employees Required to be Trained:** Individuals (called *Incident Commander*) who will assume control of an incident scene beyond the "First Responder Awareness Level". (OSHA 29 CFR 1910.120) **Competencies:** In addition to 24 hours of training equal to the technician level, specialists must have competency in the following: • Implement the employer's incident command system; • Implement the employer's emergency response plan; • Understand the hazards and risks associated with employees working in chemical PPE; • Implement the local emergency response plan; • The State emergency response plan and Federal Regional Response Team; and • Understand the importance of decontamination procedures.
5	**Incident Commander** of an industry spill response team assuming control of the incident **Training Requirement:** HAZWOPER Hazardous Material Technician Level **Frequency:** Initial **Employees Required to be Trained:** Individuals who respond to hazardous material releases or potential releases for the purpose of stopping the release. (OSHA 29 CFR 1910.120) **Competencies:** • Meet requirements for First Responder; • Implement of emergency plans; • Classify, identify, and verify hazardous material using field survey equipment; • Function an assigned role in the Incident Command System; • Hazard and risk assessment techniques; • Advance control, containment, or confined operations (within capacities of resources and the PPE available; • Decontamination procedures; • Termination procedures; • Basic chemistry and toxicology terminology and behavior; • Select and use proper specialized chemical PPE provided to hazardous material technicians.

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FIGURE A.9 - BP AMERICA RESPONSE TEAM (BART) TRAINING MATRIX

UNIT NAME/ RESPONSE SKILL	INCIDENT COMMAND SYSTEM ORIENT	INCIDENT MANAGEMENT SYSTEM	CRISIS MEDIA TRAINING	MANAGING OUTRAGE IN CRISIS	HAZWOPER 24 HOUR ON-SCENE IC	CCC FACILITY ORIENT	CRISIS MANAGER/ INCIDENT COMMANDER ORIENT	SPILL RESPONSE SCHOOL	TRAUMA AWARENESS	ANNUAL EXERCISE	SURFACING POLICY ISSUES
FREQUENCY	ONCE	ONCE	ONCE	ONCE	REFRESHER-ANNUAL	ONCE	ONCE	ONCE	REFRESHER-ANNUAL	ANNUAL	ANNUAL
COMMAND STAFF											
Crisis Manager	X	0		0		0	X	0		X	
Incident Commander	X	0		0	X	0	X	0	0	X	
C M Staff Coordinator	X	0		0	0	0		0	0	X	
Section Chief - External Affairs	X			0		0	X			X	
Public Affairs	X			0		0		0		X	
Government Affairs	X			0						X	
Community Relations	X			0						X	
Volunteer Relations	X		0							X	
OPERATIONS SECTION											
Section Chief - Operations	X	0		0	X	0		0		X	
Operations on Land	X	0	0		X			0		X	
Operations on Water	X	0	0		X			0		X	
Fire Specialist	X				X					X	
PLANNING SECTION											
Section Chief - Planning	X	0			0	0		0		X	
Resource Unit	X	0				0		0		X	
Situation Unit	X	0				0		0		X	
Environmental	X	0	0		X	0		0		X	
NRDA	X		0		0			0		X	
Wildlife Rehabilitation	X		0		X			0		X	
Waste Management	X				X					X	
Medical	X		0			0			0	X	
Industrial Hygienist	X				X			0		X	
Safety	X	0			X	0		0		X	
Toxicology	X									X	
Projects Unit	X									X	
LOGISTICS SECTION											
Section Chief - Logistics	X	0				0		0		X	
Administration Support	X					0				X	
Aviation Specialist	X									X	
Communications	X					0				X	
Human Resources	X	0	0			0			0	X	
Materials Management	X					0				X	
Security	X				0	0				X	
Systems Support	X					0				X	
Transportation Specialist	X				0	0				X	
FINANCE SECTION											
Section Chief - Finance	X	0				0		0		X	
Accounting	X					0				X	
Banking	X									X	
Litigation & Claims	X	0	0			0				X	
Legal	X	0				0				X	
Documentation	X	0				0				X	

January 2, 2001 X = REGULATORY REQUIRED TRAIN NG 0 = RECOMMENDED TRAINING

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APPENDIX B
CONTRACTOR RESPONSE EQUIPMENT

B.1 Cooperatives And Contractors _____ 2
B.1.1 OSRO Classification _____ 2

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B.1 COOPERATIVES AND CONTRACTORS

Olympic Pipe Line Company has contracted with additional Oil Spill Response Organizations OSROs to provide personnel and equipment in the event of a spill. Both NRC and Marine Spill Response Corporation (MSRC) will respond to a spill. The classification, response capabilities and equipment is described below.

B.1.1 OSRO Classification

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

The following is a listing of the USCG classified OSROs for the inland/nearshore and shoreline operating area in the Captain of the Ports (COTP), that are ensured to respond to incidents on the pipeline system and associated facilities listed in this Plan:

OSRO	USCG CLASSIFICATIONS							
Clean Rivers Cooperative *COPT:* Portland, OR Portland, OR (Coos Bay, OR)		Facilities				Vessels		
		MM	W1	W2	W3	MM	W1	W2	W3
	River/Canal	✔	✔	✔	✔	✔	✔	✔	✔
	Inland	✔	✔	✔		✔	✔	✔	
	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								
Marine Spill Response Corporation (MSRC) *COPT:* Puget Sound, WA Portland, OR Portland, OR (Coos Bay, OR)		Facilities				Vessels		
		MM	W1	W2	W3	MM	W1	W2	W3
	River/Canal	✔	✔	✔	✔	✔	✔	✔	✔
	Inland	✔	✔	✔	✔	✔	✔	✔	✔
	Open Ocean	✔	✔	✔	✔	✔	✔	✔	✔
	Offshore	✔	✔	✔	✔	✔	✔	✔	✔
	Nearshore	✔	✔	✔	✔	✔	✔	✔	✔
	Great Lakes								
NRC *COPT:* Portland, OR		Facilities				Vessels		
		MM	W1	W2	W3	MM	W1	W2	W3
	River/Canal	✔	✔	✔	✔	✔	✔	✔	✔
	Inland	✔	✔	✔	✔	✔	✔	✔	✔
	Open Ocean	✔		✔	✔	✔	✔	✔	✔
	Offshore	✔		✔	✔	✔	✔	✔	✔
	Nearshore	✔		✔	✔	✔	✔	✔	✔
	Great Lakes								

Letters of commitment for these OSRO's are included on the following pages. Copies of the entire OSRO contracts are maintained at the Olympic Administration Office and will be made available for inspection if requested by Ecology.

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COMPANY SPILL RESPONSE CONTRACTORS AND EVIDENCE OF CONTRACTS

- Clean Rivers Cooperative
- Marine Spill Response Corporation
- NRC Corporation

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11/16/00 THU 13:31 FAX 295 3660 MERCHANTS EXCHANGE 002

CLEAN RIVERS
COOPERATIVE, INC.
200 S.W. Market
Suite 190
Portland, Oregon 97201

November 8, 2000

Mr. Mike Condon
Olympic Pipeline Company
P.O. Box 1800
Renton, WA 98057

Subject: "Letter of Intent" indicating willingness to respond per WAC 317-10-050(8)(a)

Dear Mr. Condon:

This letter indicates the willingness of Clean Rivers Cooperative, Inc. ("CRC"), as an oil spill response organization for Olympic Pipeline Company, to respond to oil spill incidents requiring cleanup operations under the CRC Membership Agreement. This letter is provided pursuant to WAC 317-10-050(8)(a), which reads, in relevant part, as follows:

> "For each primary response contractor, the plan shall include a letter of intent signed by the primary response contractor which indicates the contractor's willingness to respond. Copies of written contracts or agreements with primary response contractors shall be available for inspection, if requested by the department."

As a member in good standing, CRC will make available to Olympic Pipeline, equipment and personnel for spills that require CRC response. CRC may implement its response under the Response Agreement via one or more subcontractors. CRC's agreements with those subcontractors, if any, are also available for inspection by interested state agencies, as redacted per the foregoing paragraph. Requests for copies of any agreements discussed in this letter should be directed to myself.

If you have any questions or if I can be of any further assistance, please feel free to contact me at (503) 220-2097.

Sincerely,

Brent Way/ss

Brent Way
General Manager

11/11/00 2:52 PM
PI[illegible] • Telephone (503) 220-2940 • Facsimile (503) 295-3660 • Telex 211762

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MSRC
Marine Spill Response Corporation®

Judith R. Norell
Marketing & Customer Service Manager
(703) 326-5617

August 26, 2005

Mr. Chris Maudlin
Olympic Pipe Line Company
2201 Lind Ave. SW, Suite 270
Renton, Washington 98055

Re: Letter of Intent

Dear Mr. Maudlin:

This letter certifies that BP America Inc. has entered into an Agreement with the Marine Spill Response Corporation (MSRC). Pursuant to this Agreement the Olympic Pipe Line Company and its accompanying facilities are (1) entitled by contract to MSRC response services, and (2) have the right to cite the capability of MSRC in its Facility Response Plan, in accordance with the terms and conditions of the Standard Form MSRC Service Agreement.

The enclosed Execution Instrument to the MSRC Service Agreement dated September 26, 2001 between BP America and MSRC is proof that such a contract exists. In addition, MSRC's contract is an evergreen contract and continues automatically until such time that BP America ceases to be a member of the Marine Preservation Association (MPA).

Please let me know if I may provide further assistance to you in the future.

Sincerely,

Judith R. Norell

Enclosure

220 Spring Street Suite 500 Herndon, VA 20170 Telephone 703 326 5600 Fax 703 326 5660

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MARINE SPILL RESPONSE CORPORATION
SERVICE AGREEMENT

EXECUTION INSTRUMENT

The **MSRC SERVICE AGREEMENT** attached hereto (together with this execution instrument, the "Agreement"), a standard form of agreement amended and restated as of September 27, 1996, is hereby entered into by and between

BP America, Inc.
[Name of **COMPANY**]

a Delaware Corporation
[Type of entity and place of organization]

with its principal offices located at 200 East RAndolph Drive, Chicago, IL 60601

(the "**COMPANY**"), and **MARINE SPILL RESPONSE CORPORATION**, a nonprofit corporation organized under the laws of Tennessee ("**MSRC**"), and shall be identified as

SERVICE AGREEMENT No. 6MPA 130 [This is to be provided by **MSRC**.]

IN WITNESS WHEREOF, the parties hereto each have caused this Agreement to be duly executed and effective as of Sept. 26, 2001.

BP America, Inc. [**COMPANY**]

By: [signature]

John Ridgway [print name]

Title: Regional Manager

Address: 28100 Torch Parkway
Warrenville, IL 60555

Telephone: 630 836-6869 Fax: 630 836-6987

MARINE SPILL RESPONSE CORPORATION:

By: Judith A. Roos
Judith A. Roos
Marketing & Customer Service Manager
455 Spring Park Place, Suite 200
Herndon, Virginia 20170

703/326-5617; Fax: 703/326-5660

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February 1, 2009

Steve Maulding
BP Pipelines (North America)
2201 Lind Avenue SW
Suite 270
Renton, WA 98057

Via Email: Steve.Maulding@bp.com

RESPONSE CONTRACTOR CERTIFICATION

This letter confirms that NRC Environmental Services Inc. (NRCES) has a Short Form Master Services Agreement with Olympic Pipe Line Company (OPL), Agreement No.: OLY-2008MSA001 (Agreement). Under this Agreement, NRCES is the primary response contractor providing Standby Personnel and services solely dedicated to assist OPL in meeting its 2-hour planning standards for initial booming requirements per WAC 173-182-365 beginning on or about February 1, 2009.

The scope of services provided by NRCES under the Agreement – as detailed in the incorporated "NRCES Standby Services Proposal – Revised" dated October 29, 2008 – was specified by OPL. In addition, the services provided by NRCES are based on planning standards and do not include any performance guarantees for meeting the 2-hour response planning standards during deployments for drills or actual spill responses.

If you have any questions, or if I can be of further assistance, please don't hesitate to contact me either by phone at 206-730-3993 or by e-mail at sbarton@nrces.com.

Sincerely,

Stephanie Barton

Stephanie Barton
Director, Emergency Response Programs
NRC Environmental Services Inc.

Copy: Bart Dodson, NRCES

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APPENDIX C
PIPELINE SYSTEM AND TERMINAL INFORMATION

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C.1 OVERVIEW

The Olympic Pipe Line Company operating system consists of over 400 miles of petroleum products pipelines; extending from refineries in Northwestern Washington and continuing through the State of Washington (paralleling Puget Sound and the Interstate 5 corridor), terminating near Portland, Oregon. The Cherry Point Crude Pipeline also operated by BP is covered in Appendix D.

Delivery facilities located in the State of Washington:

- Bayview,
- Renton,
- Seattle,
- Sea-Tac International Airport,
- Tacoma,
- Spanaway, and
- Vancouver;

and in the State of Oregon:

- Linnton, and
- Portland.

Olympic Pipe Line Company receives products from four (4) refineries in the State of Washington:

- BP Cherry Point Refinery,
- ConocoPhilips Northwest Ferndale Refinery,
- Tesoro NW Refinery, and
- Shell Anacortes Refinery.

The Olympic Pipe Line Company pipeline network consists of a single 16" mainline originating at the BP Cherry Point and ConocoPhilips Northwest Ferndale Refineries, which flows to Bayview Products Terminal, continuing to Allen Station. Olympic also consists of a single 16” line originating at Tesoro NW Refinery and Shell Anacortes Refinery, which flows to Bayview Products Terminal, continuing to Allen Station. Dual mainlines (16" and 20") transport petroleum products from Allen Station to Renton Pump Station.

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A single 14" mainline runs from Renton, Washington to Portland, Oregon. 12" lateral lines provide connections from Renton Pump Station to the Seattle and Sea-Tac Delivery Facilities. Lateral lines of 6", 8", and 12" carry products from the 14" main line to the Tacoma, and Vancouver Delivery Facilities, respectively.

(b) (7)(F) [redacted]

Olympic Pipe Line Company transports the following refined petroleum products within the operating system:

- various grades of gasoline,
- aviation turbine fuel (kerosene),
- diesel fuel.

(b) (7)(F) [redacted] .

The following delivery lines (**FIGURE C.1**) are owned and/or maintained by Olympic Pipe Line Company. Routine inspections of all line segments are performed on a periodic basis. (Inspection of some of these lines requires the assistance of appropriate terminal personnel.) The line segments must be physically inspected, with a verbal status report issued to the Renton Control Center, subsequent to an abnormal event encompassing the operation of these lines.

FIGURE C.2 illustrates the line segments covered in this Plan.

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FIGURE C.1 - DELIVERY LINE SEGMENTS

Bayview Delivery Facility	The Puget Power fuel delivery line terminates at the Anacortes/Ferndale (b) (7)(F) [redacted] Olympic maintains the 16" line to the Puget Power tank farm.
Renton Delivery Facility	Gasoline/fuel delivery lines to ConocoPhilips Northwest terminate at the insulated flanges within the ConocoPhilips tank farm.
Seattle Delivery Facility (Harbor Island)	Gasoline/fuel delivery lines to Kinder Morgan terminate at the insulated flanges within the Kinder Morgan tank farm. Gasoline/fuel delivery lines to Shell terminate at the insulated flanges at Shell's tank farm fire wall. Fuel delivery line to Shell's north tank farm terminates at the insulated flange within Shell's north tank farm. Gasoline/fuel delivery lines to BP terminate at the insulated flanges at Olympic's Seattle Delivery Facility.
Sea-Tac Delivery Facility	OPL leases four 6-inch outgoing delivery lines to the Port of Seattle that run between their terminal and metering facilities.
Tacoma Delivery Facility	Gasoline/fuel delivery lines previously serving Shell are out of service; purged with nitrogen. Gasoline/fuel delivery lines to ConocoPhilips Northwest terminate within ConocoPhilips' tank farm fire wall. Gasoline/fuel delivery lines to ConocoPhilips terminate within ConocoPhilips' tank farm. Gasoline/fuel delivery lines to Time terminate within Time's tank farm.
Spanaway Delivery Facility	(b) (7)(F) [redacted] Olympic is responsible for maintenance to the insulated flange downstream of the prover outlet.

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FIGURE C.1 - DELIVERY LINE SEGMENTS, CONTINUED

Vancouver Delivery Facility	Gasoline/fuel delivery lines to CENEX terminate at the insulated flanges at the 26th Street vault. Gasoline/fuel delivery lines to Tesoro terminate at the insulated flanges within Tesoro's tank farm.
Linnton Delivery Facility	Gasoline/fuel delivery lines to Kinder Morgan terminate at the insulated flanges at Olympic's Linnton Delivery Facility.
Portland Delivery Facility	Gasoline/fuel delivery lines to Shore Terminal terminate at the insulated flanges at Olympic's Portland Delivery Facility. Gasoline/fuel delivery lines to BP terminate within BP 's fire wall at the insulated flanges. Gasoline/fuel delivery lines to Time terminate at the insulated flanges at Time's tank farm.
Portland Junction	Gasoline/fuel delivery lines to Kinder Morgan terminate at the Kinder Morgan dock at the insulated flanges. Gasoline/fuel delivery lines to ConocoPhilips terminate at ConocoPhilips' tank farm fire wall. Gasoline/fuel delivery lines to Chevron terminate at Chevron's insulated flanges inside a vault. Fuel delivery lines to McCall terminate at the insulated flange at Olympic's Portland Junction facility. Gasoline/fuel delivery lines to Shell terminate inside Shell's fire wall at the insulated flanges inside a vault.

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(b) (7)(F)

FIGURE C.3 - LINE FILLS AND DISPLACEMENTS

MAINLINE SEGMENT	(b) (7)(F) [redacted]
16" Cherry Point Pump Station - Ferndale Booster Area	
16" Ferndale Booster Area - Bayview Products Terminal	
16" Bayview Products Terminal - Allen Station (B-16)	
16" Anacortes Station - Bayview Products Terminal	
16" Bayview Products Terminal - Allen Station (B-20)	
16" Allen Station - Woodinville Pump Station	
16" Woodinville Pump Station - Renton Pump Station	
20" Allen Station - Renton Pump Station	
14" Renton Pump Station - Tacoma Pump Station	
Tacoma Pump Station - Olympia Junction	
Olympia Junction - Castle Rock Pump Station	
Castle Rock Pump Station - Portland DF	
Portland DF - Portland Junction	

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FIGURE C.4 - BASE VOLUME CAPACITIES

LINE	SEGMENT (from-to)	LENGTH (miles)	INSIDE DIAMETER (inches)	CAPACITY (bbls/mile)	LINE FILL (60°F, zero pressure)
Main Line					
16"	CP - FB	5.02	15.3750	1,212.68	6,088
16"	FB - FE	0.06	15.2500	1,193.05	72
16"	FE - BV	39.00	15.3750	1,212.68	47,301
16"	BV - AL (FE)	1.80	15.3750	1,212.68	2,137
16"	AS - AA	1.51	15.5000	1,232.48	1,861
16"	AT - AA	1.12	15.5000	1,232.48	1,380
16"	AA - BV	7.80	15.3750	1,212.68	9,436
16"	BV - AL (AA)	2.30	15.3750	1,216.68	2,844
16"	AL WN	49.52	15.3750	1,212.68	60,052
16"	WN RE	26.11	15.3750	1,212.68	31,663
20"	AL WN	46.97	19.5000	1,950.68	91,623
20"	AL WN	0.07	19.4375	1,938.20	136
20"	AL WN	2.02	19.3750	1,925.75	3,890
20"	AL WN	0.46	19.0000	1,851.93	852
20"	WN RE	25.39	19.5000	1,950.68	49,528
20"	WN RE	0.91	19.4375	1,938.20	1,764
20"	WN RE	0.36	19.3750	1,925.75	693
14"	RE TJ	19.97	13.4375	926.31	18,498
14"	TJ TA	9.95	13.4375	926.31	9,217
14"	TA OJ	22.26	13.4375	926.31	20,620
14"	OJ CR	45.38	13.4375	926.31	42,036
14"	CR VJ	43.19	13.4375	926.31	40,007
14"	VJ LI	5.38	13.4375	926.31	4,984
14"	VJ LI	0.85	13.0000	866.97	737
14"	LI PO	1.05	13.4375	926.31	973

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FIGURE C.4 - BASE VOLUME CAPACITIES, CONTINUED

LINE	SEGMENT (from-to)	LENGTH (miles)	INSIDE DIAMETER (inches)	CAPACITY (bbls/mile)	LINE FILL (60°F, zero pressure)
Lateral					
12"	RE SE	12.43	12.1875	761.99	9,472
12"	RE ST	5.54	12.1875	761.99	4,221
8"	TJ TA	3.72	8.2500	349.16	1,299
6"	OJ OL	14.90	6.2500	200.39	2,986
12"	VJ VA	4.23	12.1875	761.99	3,223

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FIGURE C.5 - PIPELINE FACILITY INFORMATION

These facilities, stations and terminals are described in the following pages.

- Cherry Point Station
- Ferndale Station
- ConocoPhilips Refinery Fuel Booster Pumps
- Anacortes-Tesoro Booster
- Anacortes-Shell Booster
- Anacortes Station
- Bayview Products Terminal
- Allen Station
- Bayview Delivery Facility
- Woodinville Station
- Renton Station
- Renton Delivery Facility
- Seattle Delivery Facility
- Sea-Tac Delivery Facility
- Tacoma Junction
- Tacoma Delivery Facility
- Tacoma Station
- Spanaway Delivery Station
- Olympia Junction/Station
- Castle Rock Station
- Vancouver Junction
- Vancouver Delivery Facility
- Linnton Delivery Facility
- Portland Delivery Facility
- Portland Junction

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CHERRY POINT PUMP STATION

(b) (7)(F) [redacted]

Cherry Point Station receives product from the BP Refinery and boosts the stream to Ferndale Station. Operating personnel in this area are responsible for custody transfer measurement, quality control, operation and general maintenance of the station.

Refinery products are delivered by refinery booster pump(s) to Olympic's Cherry Point Station. A 1000-horsepower unit boosts the stream through a 16" line to Ferndale Station. The Cherry Point booster unit can be by-passed allowing the refinery boosters to pump directly to Ferndale at reduced flow rates. A gravity detection device and a 35-barrel double walled sump are provided to maintain quality control. (b) (7)(F) [redacted] A launcher, capable of launching either scrapers or spheres, is located downstream of the mainline pumping units.

(b) (7)(F) [redacted]

Products originating at Cherry Point are metered at Cherry Point for custody transfer.

FERNDALE STATION

(b) (7)(F) [redacted]

Ferndale Station receives products from the ConocoPhilips Refinery, BP Refinery or Cherry Point Station and pumps the stream to Bayview Products Terminal. Ferndale area personnel are responsible for custody transfer measurements, quality control measurements, operations and general maintenance of station equipment.

The Ferndale booster area is configured with one 800 horsepower electric centrifugal unit (fuel booster) manifolded to ConocoPhilips' F-1, F-2 and F-3 lines and one 450 horsepower electric-vertical centrifugal unit (gas booster) manifolded to ConocoPhilips' G-1, G-2, and G-3 lines.

The 450 horsepower unit is owned by ConocoPhilips and is maintained by Olympic Pipe Line Company. The Ferndale Main Line Station pumping equipment consists of one 800-horsepower and two 2000-horsepower electric centrifugal units.

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A 10 barrel double walled sump tank is located at the booster area. This sump is pumped into a 35-barrel sump located at the main line station. A (b) (7)(F) [redacted]. A launcher capable of launching either scrapers or spheres is located downstream of the main line pumping units. A receiver capable of receiving scrapers or spheres from Cherry Point Station is located upstream of the pumping units.

CONOCOPHILIPS REFINERY FUEL BOOSTER PUMPS

(b) (7)(F) [redacted]

The ConocoPhilips refinery booster fuel pumps will start when (b) (7)(F) [redacted] when the Ferndale fuel booster pump starts.

The refinery boosters have "hand - off - auto" switches which are in the "off" position until approximately 1 1/2 hours prior to start or swing to ConocoPhilips fuel, at which time the switches are placed in the "auto" position by ConocoPhilips Refinery personnel. Following Olympic's pumping of ConocoPhilips fuel, the switches are returned to the "off" position, by ConocoPhilips Refinery personnel.

There are no protective devices on the refinery boosters. A (b) (7)(F) [redacted]

(b) (7)(F) [redacted] It is in the closed position when pumping to the pipeline and open only when the refinery is making a gravity feed to the refinery truck loading rack.

ANACORTES-TESORO BOOSTER

(b) (7)(F) [redacted]

The Anacortes-Tesoro Booster Station receives products from the Tesoro refinery and pumps the stream to Anacortes Station. Anacortes area personnel are responsible for custody transfer measurements, quality control measurements, operations and general maintenance of station equipment.

Products are received by gravity flow to the Tesoro booster manifold and pump units which are located on Tesoro refinery property. A 200-hp electric-vertical centrifugal unit and a 750-hp electric-centrifugal unit boosts the stream to Anacortes Station where it is metered and pumped into the main line.

The 200hp unit is owned by Tesoro and is maintained by Olympic Pipe Line Company. A 5-barrel sump tank is provided for quality control purposes.

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ANACORTES-SHELL BOOSTER

(b) (7)(F) [redacted]

The Anacortes-Shell Booster Station receives products from the Shell refinery and pumps the stream to Anacortes Station. Anacortes area personnel are responsible for custody transfer measurements, quality control measurements, operations and general maintenance of station equipment.

Products can, when necessary, be delivered by refinery pump to the Shell booster manifold and pump which are located on Shell refinery property. A 750-horsepower booster pump boosts the stream to Anacortes Station where it is metered and pumped into the mainline.

A 10-barrel double walled sump tank is provided for quality control purposes.

ANACORTES STATION

(b) (7)(F) [redacted]

Anacortes Station receives products from the Shell or Tesoro refineries via the respective booster station and pumps the stream to Bayview Products Terminal. Anacortes area personnel are responsible for custody transfer measurements, quality control measurements, operations and general maintenance of station equipment.

The Anacortes Station pumping equipment consists of one 750-horsepower and one 1000-horsepower pumping unit.

A 210-barrel utility tank is provided at Anacortes Station. A gravity detection device and a 35-barrel double walled sump tank are provided to maintain quality control. (b) (7)(F) [redacted] es. A launcher, capable of launching either scrapers or spheres is located downstream of the pump units.

A(b) (7)(F) [redacted]

[redacted] ERMINAL

(b) (7)(F) [redacted]

Olympic's Bayview Products Terminal receives products from the Ferndale and Anacortes 16" lateral lines and boosts product to Allen station via two 16" laterals. Operating personnel at this location are responsible for quality control measurements and for operations and general maintenance of terminal equipment.

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Products from either lateral line may be partially or completely diverted into one of the five above ground storage tanks or the above ground utility tank is 10,000 barrel capacity. (b) (7)(F) [redacted] t. Transmix product may be injected into either outgoing lateral line. Pumping equipment consists of three 1250-horsepower electric-centrifical units. The units are connected in a series with one unit dedicated to each outgoing lateral and one unit configured as a swing unit, it can boost to either outgoing lateral. (b) (7)(F) [redacted]. Metering facilities are for line integrity.

(b) (7)(F) [redacted]

Allen Station's facilities enable product streams from the two lines coming from Bayview Products Terminal to be pumped into the 16" Allen-Renton line or the 20" Allen Renton line.

Allen 16" Station pumping equipment consists of one 1500-horsepower and two 2500-horsepower electric/centrifugal units connected in series. A(b) (7)(F) [redacted] to control minimum suction and maximum discharge pressures.

Allen 20" Station pumping equipment consists of two 2500-horsepower electric/centrifugal units connected in series. A(b) (7)(F) [redacted]

A 2000-barrel utility tank is provided for interfaces arriving from the incoming B-16 and B-20 lines. The interface material is disposed of primarily by injection into either the 16" Allen-Renton line or the 20" Allen-Renton line. A 35-barrel sump which pumps into the utility tank is provided for quality control purposes.

BAYVIEW DELIVERY FACILITY

(b) (7)(F) [redacted]

Bayview Delivery Facility has the function of making deliveries from either the 16" line or 20" line into tankage of Puget Sound Energy. Anacortes area personnel are responsible for custody transfer measurements, quality control, operation and general maintenance of the equipment.

Deliveries to PSE can be stripped from either the 16" or 20" mainline or either mainline stream can be turned full to PSE. (b) (7)(F) [redacted]

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A 35-barrel sump is installed at Bayview Delivery Facility for quality control purposes.

WOODINVILLE STATION

(b) (7)(F) [redacted]

Woodinville Station operates as a pumping station on the Allen-Renton 16" mainline. Operating personnel for this location are responsible for operation and general maintenance of station equipment. The Allen-Renton 20" line passes through the station so that the sump may be pumped into either the 20" or the 16" mainline.

Woodinville Station pumping equipment consists of one 1000-horsepower electric-centrifugal unit and one 2000-horsepower electric-centrifugal unit. (b) (7)(F) [redacted]

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

(b) (7)(F) [redacted]

Renton Station operates as a pump station on the 14" mainline, boosting the stream from either the 16" or 20" Allen-Renton mainline and as the junction point for deliveries to the Seattle 12" lateral line, the Sea-Tac 12" lateral line and to Renton Delivery Facility. Operations personnel are responsible for product quality, measurements, operation and general maintenance of the station equipment.

Renton Station's pumping equipment consists of three electric-centrifugal units (a 1250 horsepower and two 2500 horsepower). The pumping units are connected in series and may be used in any combination. (b) (7)(F) [redacted]

A 10,000 barrel utility tank is provided for interfaces arriving in the incoming 16" and 20" lines. The interface material is disposed of primarily by injection into the 14" mainline stream, the Seattle lateral line stream or the Renton Delivery Facility stream. A 35-barrel sump tank is installed which can pump into the utility tank.

Receivers capable of handling either spheres or scrapers are installed on the 16" and 20" incoming mainlines. Launchers are installed on the 14" Portland mainline, the 12" Seattle lateral line and the Sea-Tac 12" lateral line.

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(b) (7)(F) [redacted]

RENTON DELIVERY FACILITY

(b) (7)(F) [redacted]

Renton Delivery Facility has the function of making deliveries from the 16" or 20" manifold at Renton Station to ConocoPhilips' tankage at its Renton Terminal. Olympic operating personnel in the area are responsible for custody transfer measurement, quality control and for operation and general maintenance of the equipment.

Deliveries to ConocoPhilips are made through Olympic's custody transfer turbine meter and dual 12" delivery lines.

The 35-barrel Renton Station sump is used for Renton Delivery Facility drain-down and quality control purposes. The 10,000-bbl utility tank is used to contain interface. (b) (7)(F) [redacted]

SEATTLE DELIVERY FACILITY

[redacted] (b) (7)(F) [redacted]

Seattle Delivery Facility delivers product from the 12" Renton-Seattle lateral line into tankage at BP, Kinder Morgan, and Shell terminals. Operating personnel at this location are responsible for custody transfer, product quality, and for operation and general maintenance of the facility.

A 35-barrel sump tank pumps into the 1000-barrel utility tank. Transmix accumulated in the utility tank is disposed of by injection.

(b) (7)(F) [redacted]

SEA-TAC DELIVERY FACILITY

(b) (7)(F) [redacted]

Sea-Tac Delivery Facility delivers only aviation turbine fuel into tankage at the Seatac Terminal (**S1**), through a 12" lateral line from Renton Station. The Seatac Delivery is monitored and controlled by the Renton Control Center. Seatac Terminal is owned by the Port of Seattle and operated by Swiss Port.

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OPL leases four 6-inch outgoing delivery lines to the Port of Seattle that run between their terminal and metering facilities. Swiss Port monitors integrity on these lines and sends regular reports to the RCC Supervisor.

(b) (7)(F) [redacted]

Tacoma Junction has the function of delivering products from the 14" Renton-Portland into the 8" Tacoma stub line. South Area operating personnel at this location are responsible for quality control measurements and for operations and general maintenance of equipment.

Products may be stripped from the 14" mainline stream or the stream may be turned full to the 8" Tacoma stub line. (b) (7)(F) [redacted] launcher capable of handling either scraper or spheres is located on the 8" Tacoma stub line.

A 5-barrel sump tank is provided for quality control purposes. The sump tank at Tacoma Junction pumps into the 8" lateral line.

FACILITY

(b) (7)(F) [redacted]

Tacoma Delivery Facility delivers product from the 8" Tacoma lateral line into tankage at ConocoPhilips, Unocal and Shore terminals. Operating personnel at this location are responsible for custody transfer, product quality, and for operation and general maintenance of the facility.

A 35-barrel sump tank pumps into the 250-barrel utility tank. Transmix accumulated in the utility tank is disposed of by injection.

(b) (7)(F) [redacted]

TACOMA STATION

(b) (7)(F) [redacted]

Tacoma Station operates as a pumping station on the Renton-Portland 14" mainline. Operating personnel for this location are responsible for operation and general maintenance of station equipment.

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Tacoma Station pumping equipment consists of two 2500-horsepower electric-centrifugal units. (b) (7)(F) [redacted]

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

A 35-barrel sump is installed to contain product which is injected into the mainline stream.

FACILITY

(b) (7)(F) [redacted]

Spanaway Delivery Facility has the function of making deliveries directly from the 14" line into tankage of Puget Sound Energy. Tacoma Area personnel are responsible for custody transfer measurements, quality control, operation and general maintenance of the equipment.

Deliveries to Puget Power can be stripped from the 14" main line or the main line stream can be turned full to Puget Power. (b) (7)(F) [redacted]

A 35-barrel sump is installed at Spanaway Delivery Facility for quality control purposes.

OLYMPIA JUNTION/STATION

(b) (7)(F) [redacted]

Olympia Junction/Station operates as a pumping station on the Renton-Portland 14" mainline. Products may be stripped from the 14" mainline stream to the 6" Olympia lateral downstream of the pumping units. Operating personnel for this location are responsible for product quality, operation and general maintenance of station equipment.

Olympia Junction/Station pumping equipment consists of two 2500-horsepower electric-centrifugal units. (b) (7)(F) [redacted]

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

Drag Reducing Agent (DRA) can be injected into the 14" line.
(b) (7)(F) [redacted]
A 35-barrel sump is installed to contain product which is injected into the mainline stream.

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CASTLE ROCK STATION

(b) (7)(F) [redacted]

Castle Rock Station operates as a pumping station on the Renton-Portland 14" mainline. Operating personnel are responsible for product quality and operation and general maintenance of station equipment.

Castle Rock Station pumping equipment consists of two 2500 horsepower electric-centrifugal units. (b) (7)(F) [redacted]

An automatic sphere by-pass system is installed to allow spheres to by-pass the pumping station without shutting down the pump units.

Drag Reducing Agent (DRA) can be injected into the 14" line.
A 35-barrel sump is installed to contain product which is later injected into the main line stream.

VANCOUVER JUNCTION

(b) (7)(F) [redacted]

Vancouver Junction has the function of delivering products from the 14" Renton-Portland line into the 12" Vancouver lateral line. Operating personnel at this location are responsible for quality control measurements, operations, and the maintenance of equipment.

Products may be stripped from the 14" mainline stream or the stream may be turned full to the 12" Vancouver lateral line. A scraper trap is located on the 12" Vancouver lateral line. A sphere or scraper loaded into the trap will be launched, (b) (7)(F) [redacted]

A 25-barrel sump tank which is pumped into the lateral line is provided for quality control purposes.

VANCOUVER DELIVERY FACILITY

2251 Saint Francis Lane
Vancouver, WA 98660

Vancouver Delivery Facility has the function of making deliveries from the 12" Vancouver lateral line to the Tesoro terminal. Operating personnel at this location are responsible for custody transfer, quality control, and for operations and general maintenance of equipment.

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Deliveries from the 12" line are made through Olympic's custody transfer meter and manifold. Each terminal is connected to Olympic's manifold by a 12" gasoline delivery line and a 12" fuel delivery line. A 1,000-barrel utility is used for interface disposal either by injection into the delivery stream or by loading into tank truck.

A 35-barrel sump is used for quality control purposes. The receiver on the incoming line can accommodate either spheres or scrapers. (b) (7)(F) [redacted]

LINNTON DELIVERY FACILITY

(b) (7)(F) [redacted]

Linnton Delivery Facility has the function of making delivery from the 14" Renton-Portland mainline into Kinder Morgan tankage. Area operating personnel are responsible for custody transfer measurements, quality control, operation, and general maintenance of equipment.

Deliveries from the 14" line are made through Olympic's custody transfer meter and manifold.

A 35-barrel sump tank is located at Linnton D.F. for quality control purposes. (b) (7)(F) [redacted]

PORTLAND DELIVERY FACILITY

(b) (7)(F) [redacted]

Portland Delivery Facility has the function of making deliveries from the 14" mainline directly to BP, Shore Terminal and Shore Services terminals and to Kinder Morgan, Chevron, Union, McCall and Shell terminals by way of (b) (7)(F) [redacted] ich is downstream of Portland D.F. Operating personnel at this location are responsible for custody transfer, quality control and for operation and general maintenance of equipment.

Deliveries are made through Olympic's custody transfer meter and manifold. The BP, Shore Terminal and Shore Services terminals are each connected to Portland Delivery Facility by dual 14" delivery lines - one for gasoline and one for fuel. A 14" gasoline line and a 14" fuel line extend from Portland Delivery Facility to Portland Junction where (b) (7)(F) [redacted], Chevron, Union, McCall and Shell. Two 2000-barrel utility tanks are used for interface disposal either by injection into the delivery stream or by loading into tank trucks. Portland also has the ability of off-loading trucks into tanks 105 and 106.

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A 35-barrel sump is used for quality control purposes. The receiver on the incoming line can accommodate either spheres or scrapers. (b) (7)(F) [redacted]

PORTLAND JUNCTION

(b) (7)(F) [redacted]

Portland Junction (Willbridge) has dual 14" lines (a gasoline line and a fuel line) incoming from Portland Delivery Facility. (b) (7)(F) [redacted]

Custody transfer of the products at Portland Junction has been made upstream at Portland Delivery Facility.

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(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

APPENDIX D
CHERRY POINT REFINERY 24" CRUDE PIPELINE

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D.1 INTRODUCTION

Information contained in this Appendix is specific to the operation of the Cherry Point Refinery 24" Crude Pipeline only. Items not addressed in this Appendix are covered in the appropriate sections throughout the Plan.

The 24-inch Bi-directional Crude Transfer Pipeline supplies the BP Cherry Point (CP) Refinery with crude oil. The refinery receives light and heavy oil from Terasen Inc. owned and operated Terasen Pipeline. The refinery can also receive or deliver crude to the ConocoPhillips Ferndale Refinery. (b) (7)(F) [redacted] e.

The 24-inch pipeline is 5.3 miles long. (b) (7)(F) [redacted] / Terasen Pipeline Inc. Valve Facility and ends at the BP Cherry Point Refinery. The 24-inch Crude Pipeline is owned by BP West Coast Products Company; maintained by the Olympic Pipeline Business District, and monitored and operated by the (b) (7)(F) [redacted]

The 24-inch Crude Pipeline is located entirely within Whatcom County, Washington State. It begins just west of the town of Ferndale, WA, near Lake Terrell and transverses northerly through ConocoPhilips property and the Alcoa Aluminum Plant right of way to the BP Cherry Point Refinery near Birch Bay. The pipeline shares easement along with the 6-inch Butane Pipeline, 8-inch Ferndale NG Pipeline, and the 16-inch Olympic Pipeline.

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FIGURE D.1 - CRUDE LINE EMERGENCY RESPONSE NOTIFICATION FLOWCHART & LOG

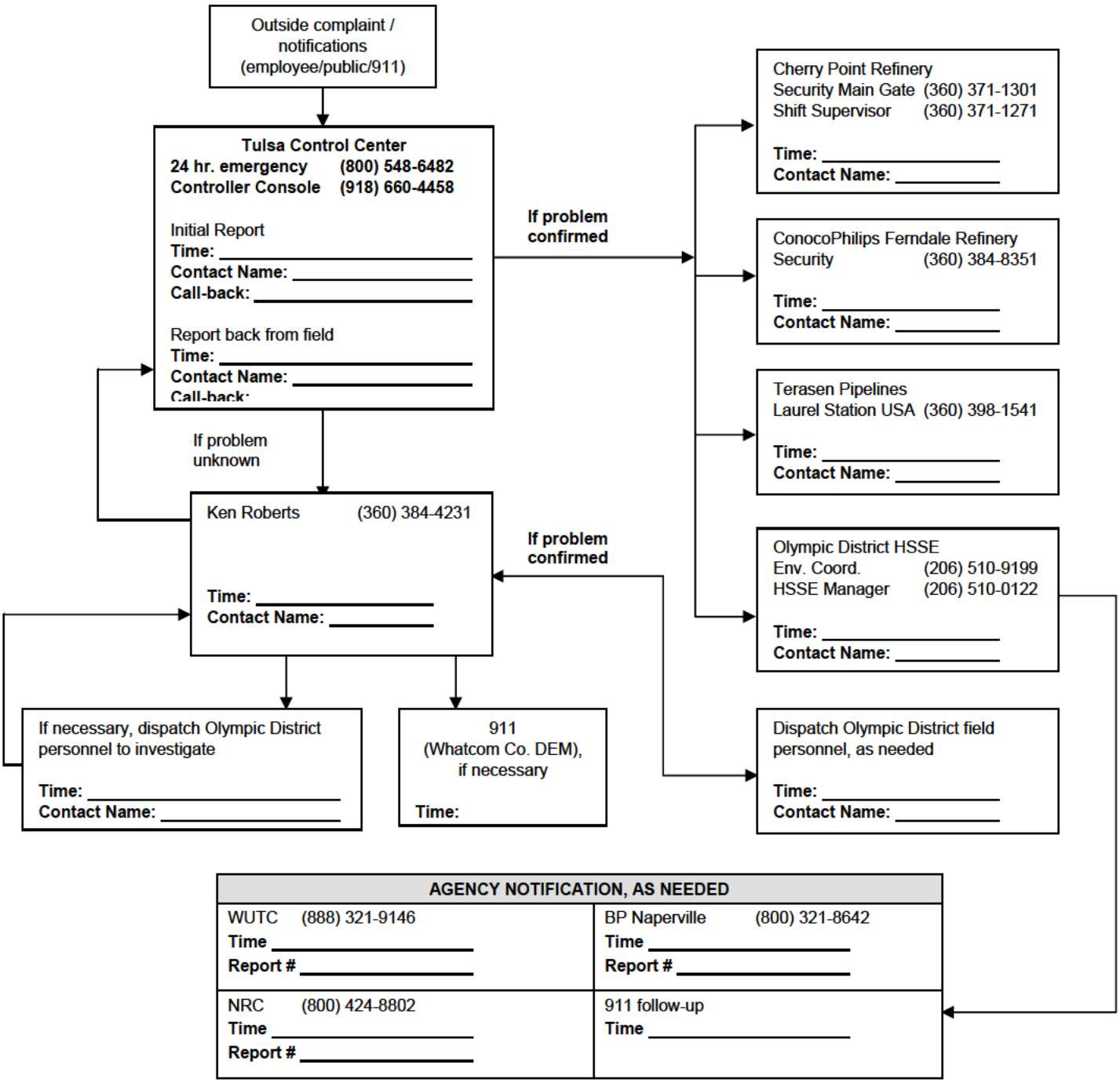

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FIGURE D.2 - CHERRY POINT CRUDE PIPELINE NOTIFICATION GUIDE

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
OLYMPIC DISTRICT CONTACTS			
Stevew Maulding District Manager	(425) 981-2575 (Office) (425) 358-0917 (Cell) (425) 981-2525 (Fax)		
Rose Ann Lopez Operations Manager	(425) 227-5213(Office) (206) 730-5063(Cell) (425) 981-2525 (Fax)		
Dennis Johnston North Area Team Leader	(360) 424-0365 (Office) (360) 815-0345 (Cell) (360) 848-1484 (Fax)		
Ken Roberts Pipeline Coordinator	(360) 384-4231 (Office) (360) 815-0353 (Cell) (360) 384-4200 (Fax)		
Perry Dalaba Field Spec. Support	(360) 757-6447 (Office) (360) 336-9842 (Cell) (360) 848-1484 (Fax)		
Trisha Chambers Field Spec. Support	(360) 428-4214 (Office) (360) 815-5152 (Cel) (360) 848-1484 (Fax)		
Scott Sanders Field Spec. Support	(360) 428-4214 (Office) (360)815-5298 (Cell) (360) 848-1484 (Fax)		
Gunter Wilder Field Spec. Support	(360) 815-0560 (Cell) (360) 848-1484 (Pager)		

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FIGURE D.2 - CHERRY POINT CRUDE PIPELINE NOTIFICATION GUIDE, CONTINUED

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
OLYMPIC DISTRICT CONTACTS, CONTINUED			
Shan Mathews HSSE Manager	(425) 981-2534 (Office) (206) 510-0122 (Cell) (425) 981-2525 (Fax)		
Neil Norcross HSSE	(425) 235-7743 (Office) (206) 510-9199 (Cell) (425) 981-2525 (Fax)		
Jeremy Young HSSE	(425) 981-2585 (Office) (206) 793-9682 (Cell) (425) 981-2525 (Fax)		
Mike Abendhoff External Affairs	(360) 371-1519 (Office) (360) 303-5278 (Cell) (360) 371-1450 (Fax)		
Bill Kidd External Affairs	(360) 371-1145 (Office) (360) 303-5349 (Cell) (360) 371-1684 (Fax)		
Renton Control Center (Emergencies Communication help only)	(888) 271-8880 (Office) (425) 235-7726(Office)		
TULSA CONTROL CENTER CONTACTS			
Pipeline Controller / Console (24 hours)	(918) 660-4458 (Office) (918) 660-4392 (Fax)		
Michael Szymanski Operations Supervisor	(918) 660-4303 (Office) (b) (6) [redacted] (918) 607-4321 (Cell) (918) 660-4397 (Fax)		
John Page Compliance/Safety Coordinator	(918) 660-4362 (Office) (918) 607-4362 (Cell) (918) 660-4399 (Fax)		
Emergency Number (24 hours)	(800) 548-6482 (Office)		

COMPANY	CONTACT	OFFICE NUMBER	ALTERNATE NUMBERS / NOTES
CHERRY POINT REFINERY			
Cherry Point Refinery, Crude and Butane	For immediate needs and emergencies: Main Gate Security Shift Supervisor	(360) 371-1301 (360) 371-1271	Contact main gate if unable to reach shift supervisor
BP Terminal for Butane	Control Board	(360) 384-1701	
KinderMorgan / TERASEN PIPELINE, FOR 24" CRUDE			
Laural Station USA		(360) 398-1541	
Edmonton Control Center, Canada Emergency		(780) 449-5732 (888) 876-6711	
CONOCOPHILLIPS REFINERY, FOR 24" CRUDE			
Security		(360) 384-8351	
Dock Control Board		(360) 384-8349	
Shift Supervisor		(360) 384-8323	

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D.2 LINE SEGMENTS AND FILLS

SEGMENT	MILES	LINE FILL	ACCUMULATIVE	LINE DIAMETER
Terasen to ConocoPhillips	0.28	180	180	24"
ConocoPhillips to BP Cherry Point	5.02	13,820	14,000	24"

Routine inspection of all line segments shall commence on a periodic basis. The line segments must be physically inspected, with a verbal status report issued to the Tulsa Control Center subsequent to an abnormal event encompassing the operation of these lines.

(b) (7)(F)

[redacted]

D.4 MONITORING, CONTROL, AND COMMUNICATIONS

(b) (7)(F)

[redacted]

The data communications is by satellite and voice communications is by cell phone and/ or regular phone system and a paging system.

Any communications outage is considered an “abnormal operating condition” by the Department of Transportation (DOT) 49CFR 195.402 (d) (iii)

D.5 NORMAL OPERATIONS

Normal operating Parameters

(b) (7)(F)

[redacted]

- Pigging operations will be handled by Field Specialist. TCC will monitor and track (via Batch Tracking) the scraper to the refinery.

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D.6 ABNORMAL OPERATIONS

(b) (7)(F)

[redacted]

D.6.3 Other Abnormal Operations

The procedures for handling these are referenced in **SECTION 2** of this Manual and the OM&ER Manual Book I.

D.7 REPORTABLE OIL SPILL HISTORY

There have been no reportable spills from this line in the last five (5) years.

D.8 WORST CASE DISCHARGE

The Worst Case Discharge (WCD) for the DOT portion of the pipeline is calculated as follows:

(b) (7)(F)

[redacted]

D.9 OSRO INFORMATION

MSRC, and NRC (formerly FOSS) will respond to releases from the crude line, as indicated in the letters provided in **APPENDIX B** of this Plan.

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APPENDIX E
HAZARD EVALUATION AND RISK ANALYSIS

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E.1 PIPELINE - ABNORMAL CONDITIONS

Because PHMSA considers the "substantial threat" term in 49 CFR Part 194.115(a) equivalent to the "abnormal conditions" term under 49 CFR Part 195.402(d), procedures to identify events and conditions that can pose a threat of worst case discharge, and actions to take for preventing and mitigating such events and conditions are described in *Company's Operations Maintenance and Emergency Response Manual*.

E.2 REPORTABLE OIL SPILL HISTORY

Reportable oil spills for the Olympic Pipeline are recorded in **FIGURE E.1**.

FIGURE E.1 - REPORTABLE OIL SPILL HISTORY RECORD

DATE	LOCATION	CAUSE	PRODUCT/LOSS (bbls)	RECOVERED (bbls)
5/27/97	Castle Rock	Seal Failure	26 gas/diesel	11
6/10/99	Bellingham - Whatcom Creek	Mainline rupture - 3rd party/pressure surge	5500 gasoline	Unknown
8/29/99	Renton Station	Pump failure	80 transmix	70+
4/2/02	Bayview Products Terminal	Fitting loose	0.36 diesel	0.36
12/28/02	Renton Station	Gauge failure	35 transmix	35
4/16/04	Olympia Junction	Pressure switch failure	0.36 gasoline	0.36
5/23/04	Renton Station	Unknown	45 gasoline	20
7/15/05	Renton station	Sump Level Indicator	0.95 transmix	0.95
11/7/05	Woodinville Station	Valve Seal Failure	0.71 gasoline	0.71
12/20/07	Anacortes – K Booster Sta.	Sump Level Switch Failure	0.16 transmix	0.12
5/3/09	Bayview Terminal	Pressure Gauge	1.5 transmix	1.5

(b) (7)(F)

E.3 DISCHARGE SCENARIOS

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

E.3.1 Worst Case Discharge (WCD) Scenario Discussion

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Worst case discharge calculations for DOT are described in **APPENDIX E.5**. Additional WDOE and ODEQ required worst case discharges are described in **APPENDIX E.7**. Discussion of this scenario is as follows:

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

1. First person to discover the spill would immediately notify the Renton Control Center (RCC) in accordance with **FIGURE 2.1**.

2. RCC Controller notifies Team Leader and Control Center Supervisor.

3. Control Center Supervisor notifies the District Manager (Qualified Individual) who would assume role as Incident Commander, as well as other personnel as needed (refer to **FIGURE 2.1**).

4. District Manager may handle all aspects of a response. Among those actions would be to:

   - Conduct safety assessment and evacuate personnel as needed
   - Direct responders to shut down ignition sources
   - Direct responders to shut down and control sources of spill
   - Direct personnel to deploy containment boom or other equipment as appropriate
   - Complete spill reports and notifications as described in **FIGURE 3.7**.

5. The District Manager would activate selected portions of the Incident Management Team. For a large spill, the District Manager would activate the entire Incident Management Team, BP America Response Team and Business Crisis Team, if necessary, as described in **SECTION 4**.

6. The Incident Commander would then initiate spill assessment procedures including surveillance operations, trajectory calculations, and spill volume estimating in accordance with **SECTION 2**.

7. The Incident Commander would then use checklists in **SECTION 4** as a reminder of issues to address. The primary focus would be to establish incident priorities and objectives and to brief staff accordingly.

8. The Incident Management Team would develop the following plans, as appropriate (some of these plans may not be required during a small or medium spill):

   - Site Safety

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- Incident Action
- Disposal
- Site Security
- Decontamination
- Alternative Response Strategies
- Demobilization

Plan templates are included in **SECTION 5** and **FIGURE 8.2**.

9. The response would continue until an appropriate level of cleanup is attained.

10. In the unlikely event of simultaneous spills from the pipeline, additional contractor equipment and personnel, and BART personnel would be mobilized as needed.

E.4 PLANNING VOLUME CALCULATIONS

Once the worst case discharge volume has been calculated, response resources must be identified to meet the requirements of 49 CFR 194.105(b). Calculations to determine sufficient amount of response equipment necessary to respond to a worst case discharge is described below.

E.5 SPILL VOLUME CALCULATIONS

A. DOT 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.

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Under PHMSA's current policy, operators are allowed to reduce the worst case discharge volume derived from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the worst case discharge volume based on breakout tanks in the response zones as follows:

SPILL PREVENTION MEASURES	PERCENT REDUCTION ALLOWED
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30	50%
Tank built, rebuilt and repaired according to API Std 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to NFPA/API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%
Maximum allowable credit or reduction	75%

The worst case discharge for the pipeline system was based on the largest volume of the three criteria stated in Part A of this section.

The Company has determined the worst case discharge volume to be a catastrophic line failure of the largest line section with the greatest drainage capacity in each response zone or 50 percent of the volume of the largest tank in each zone.

The line sections with the highest throughput and largest drainage volume between block valves on pump stations were chosen using the Valve Effectiveness Study 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, tanks are built, rebuilt and repaired according to API Std 620/650/653, automatic high-level alarms/shutdowns designed according to NFPA/API RP 2350, testing/cathodic protection designed according to API Std 650/651/653, and tertiary containment/drainage/treatment per NFPA 30, therefore, the discharge volumes for the largest tank was determined by adjusting the total tank volume downward by 75% per PHMSA and API recommendations.

LOCATION	VOLUME (barrels)
Bayview Products Terminal	(b) (7)(F) [redacted]

An example of WCD calculation for the Olympic Pipeline 20" main line at MP74 is as follows:

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(b) (7)(F)

[redacted]

The volume of release from a line break compared to that of historic discharge in the zone and to the volumes released from a tank failure, the tank failure was found to represent the worst case scenario.

E.6 PRODUCT CHARACTERISTICS AND HAZARDS

The Company transports gasoline, diesel fuel and aviation turbine fuel through the pipeline from various refineries to delivery facilities in Washington and Oregon. Gasoline is classified as a Non-persistent, Group 1 oil while diesel fuel and aviation turbine fuel are Persistent, Group 2 oils as defined in 40 CFR 112. Specific gravity and hazard classifications for each product are listed in the table below. Additional information may be obtained by contacting the HSS&E Manager.

PRODUCT	SPECIFIC GRAVITY	HAZARD CLASSIFICATIONS	
		49 CFR	NFPA
Gasoline	0.7321 at 20°C	Class 3 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0
Diesel Fuel	0.841 at 15°C	Class 3 Flammable Liquid	Health Hazard (Blue) 0 Flammability (Red) 2 Reactivity (Yellow) 0
Aviation Turbine Fuel (Kerosene)	0.80 at 15°C	Class 3 Flammable Liquid	Health Hazard (Blue) 0 Flammability (Red) 2 Reactivity (Yellow) 0
Crude Oil	0.855 at 15°C	Class 2 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0

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E.7 WDOE/ODEQ WORST CASE DISCHARGE VOLUMES AND SPILL SCENARIOS

These scenarios are specifically provided to satisfy the requirements of the WDOE and ODEQ regarding response capabilities and response times for worst case discharges and small spills along the Olympic Pipeline system. They are not intended to replace or supercede any requirements established by USDOT or USEPA. The scenarios are presented using WDOE WAC 173-182-350 planning spreadsheet, **FIGURE E.2**, which specifies the develpoment of a WCD for each Water Resource Inventory Area (WRIA) where Olympic operates. Each WRIA WCD scenario includes information of the type of oil, volume, location and impacted water body of the potential release. The table includes the type, location and travel distances for dedicated response equipment needed to meet the 2, 6, 12, 24 and 48 hour planning standards. The equipment lists should be used as an evaluation that the planning standards can be met with existing dedicated equipment and not interpreted as restricting the use of all additional dedicated and non dedicated equipment should it be needed.

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FIGURE E.2 – WCD Planning Spreadsheet, WRIA 1
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WAC 173-182-365 Transmission pipelines and pipeline tank farms.

NOTE: A separate spreadsheet may be needed for each water crossing

NOTE: Planning standard calculations shown indicate resources listed on he WRRL and information provided hrough he Primary Response Contractor applications as of plan approval (condi ional)date. This informa ion is subject to change as equipment is acquired and relocated to meet he planning standards.

NOTE: This equipment does not necessarily represent the equipment that would be deployed in the event of a spill. This is not a response standard, this is only a representation of equipment that would be available based on the guidelines set for h in WAC 173-182 for planning standards, determining effectiveness of recovery systems, documen ing compliance wi h planning standards, and plan evaluation criteria. Actual times and performance will depend on traffic, weather, safety considerations, and operator discre ion.

NOTE: For freshwater environments, shoreside storage can be identified to meet sixty-five percent of the storage requirements ou lined in the planning standards if the plan holder can demonstrate hat recovered oil can be transported to the shoreside storage. For marine enviornments, shoreside storage can be identified to meet sixty-five percent of he storage requirements outlined in the planning standards if the plan holder can demonstrate that recovered oil can be transported to the shoreside storage. Access to fixed temporary storage is verified through plan review, letters of intent between companies, and primary response contractor applica ions.

NOTE: The 2 hour benchmark requirements are based on information submitted by the plan holder and calculated as outlined in WAC 173-182-365. A default of 2000 feet will be applied for each water crossing where the plan holder has not submitted information to calculate the 2 hour boom requirements.

Plan Holder: **Olympic Pipe Line Co.**

PRC: **MSRC, NRCES, CRC**

(b) (7)(F)

[redacted]

Mutual Aid: BP Cherry Point

Shoreside storage available: BP Cherry Point and BP Portland as available

Category Definitions

Mobilization Times	Boom Type
Dedicated, plan holder owned = 30 mins	**B1**: boom > 42"
Dedicated, PRC owned = 1 hour	**B2**: boom between 18" and 42"
Non-Dedicated = 3 hour	**B3**: boom < 18"

Planning Transit Distance = [(hour benchmark - mobilization time) x transit speed]

Distance to Planning Standard = miles/nautical miles from staging area to he applicable planning standard.

Distance to Planning Standard < 1m: The equipment is staged wi hin he planning standard area.

Product: oil group(s) in which skimmers can be effective. Definition - 33CFR155.1020

Assets in italics are available for a response however no transportation or support platform is associated to be counted toward the planning standards.

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Benchmark Calculations

Hr 2

Boom available at the spill source or downstream of the source could have arrived

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
NRCES	OPL Trailer w/skiff (12") (8")	Bayview Terminal	0.5	52 m	w/ in range	-	-	2000	-	-	-	-	2
					2 Hour totals	**-**	**-**	**2000**	**-**	**-**	**-**	**-**	**2**

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 2 hour planning standard.

Hr 6

Boom: Additional 5,000 feet of boom available for containment, recovery or protec ion could have arrived. — **5000' boom required**

Recovery: Capacity to recovery the lesser of 10% of worse case spill volume or 12,500 barrels within 24-hour period could have arrived. — **550 bbls recovery required**

Storage: 1 times the EDRC — **446 bbls storage required**

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
					Equipment Remaining from 2 hour WIRA benchmark	-	-	-	-	-	-	-	-
MSRC	MiniBarge PS#1	Anacortes	3	105 m	w/ in range	-	-	-	-	-	-	100	-
MSRC	Minibarge PS#2	Anacortes	3	105 m	w/ in range	-	-	-	-	-	-	100	-
MSRC	Small Boom Trailer (12")	Tacoma	1	175 m	w/ in range	-	-	4000	-	-	-	-	2
MSRC	Morris MI-30 w/tank (2 liquitotes)	Everett	1	175 m	w/ in range	-	-	-	987	-	-	28	1
MSRC	Aquaguard #1 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
NRCES	Lund skiff 6318	Tacoma	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Jon Boat #2	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Response 5	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Utility boat / small support	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Response 1 (4"x6")	Seattle	1	175 m	w/ in range	-	-	1000	662	-	-	17	2
NRCES	Vac Truck (3x70 bbls)	Kent	1	175 m	w/ in range	-	-	-	-	-	-	210	2
MSRC	Aquaguard #2 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
MSRC	Trailer 60, Boom (18")	Tacoma	3	105 m	w/ in range	-	-	4000	-	-	-	-	-
MSRC	Trailer 20, (2"x4")	Everett	3	105 m	w/ in range	-	-	2900	-	-	-	-	-
NRCES	Lund skiff	Anacortes	1	175 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund skiff 6457 (#2)	Anacortes	1	175 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	SWB 133 w/pushboat	Anacortes	3	105 m	w/ in range	-	60	-	905	-	-	400	2
					6 Hour Totals	**-**	**60**	**11900**	**3274**	**-**	**-**	**903**	**24**

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 6 hour planning standard.

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Hr 12													
	Boom: Additional 20,000 feet of boom with at least 5,000 feet of boom for containment, protection or recovery could have arrived					**20,000' boom required**							
	Recovery: Capacity to recover the lesser of 15% of worst case spill volume or 36,000 barrels wi hin 24-hr period could have arrived.					**275 bbls additional recovery required**							
	Storage: 2 times the EDRC (54,000 bbl total storage, 50% on water)					**223 bbls additional storage required**							
Organization	**Asset**	**Home Base**	**Mobilization Time (hr)**	**Planning transit distance**	**Distance to Planning Standard**	**Boom Type B1 (feet)**	**Boom Type B2 (feet)**	**Boom Type B3 (feet)**	**EDRC (BPD) shallow / calm capable**	**EDRC (BPD) open water capable**	**Product (Group II, III, IV, V)**	**On Water Storage (BBLS)**	**People**
					Available equipment remaining from 6 hour requirements	-	60	6900	2724	-	-	457	-
NRCES	OPL Trailer w/skiff (12") (8")	Milton	0.5	402 m	w/ in range	-	-	2000	-	-	-	-	2
NRCES	Lund Skiff 6504	South Park	1	315 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	Trailer 45, Boom (18")	Seattle	3	315 m	w/ in range	-	-	3200	-	-	-	-	-
MSRC	Trailer 66, Boom (18")	Anacortes	3	315 m	w/ in range	-	-	2900	-	-	-	-	-
MSRC	Trailer 77, Boom (18")	Bellingham	3	315 m	w/ in range	-	-	3200	-	-	-	-	-
MSRC	Minibarge PS#3	Tacoma	3	315 m	w/ in range	-	-	-	-	-	-	100	-
MSRC	Trailer 75 (8"x12")	Anacortes	3	315 m	w/ in range	-	4500	-	-	-	-	-	-
MSRC	SWB 19 w/ pushboat	Everett	3	315 m	w/ in range	-	60	-	905	-	-	400	2
NRCES	Lund Skiff 6503 M4	Anacortes	3	315 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund Skiff 6214	Anacortes	3	315 m	w/ in range	-	-	-	-	-	-	-	2
					12 Hour Totals	-	4620	18200	3629	-	-	957	10
Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 12 hour planning standard.													

Hr 24 & 48													
	Boom: Additional as required					**Additional boom as required**							
	Recovery: Capacity to recover the lesser of 20% of worst case spill volume or 48,000 barrels wi hin 24-hr period could have arrived.					**500 bbls additional recovery required**							
	Storage: 3 times the EDRC (54,000 bbl total storage, 50% on water)					**669 bbls additional storage required**							
Organization	**Asset**	**Home Base**	**Mobilization Time (hr)**	**Planning transit distance**	**Distance to Planning Standard**	**Boom Type B1 (feet)**	**Boom Type B2 (feet)**	**Boom Type B3 (feet)**	**EDRC (BPD) shallow / calm capable**	**EDRC (BPD) open water capable**	**Product (Group II, III, IV, V)**	**On Water Storage (BBLS)**	**People**
					Available equipment remaining from 12 hour requirements	-	2760	-	2449	-	-	744	-
NRCES	OPL Trailer w/skiff (12") (8")	Cas le Rock Station	0.5	822 m	w/ in range	-	-	2000	-	-	-	-	2
NRCES	Boom Trailer (6"x6")	Pasco	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
NRCES	Boom Trailer (6"x6")	Spokane	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
					24 Hour Totals	-	2760	4000	2449	-	-	744	2
Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 24 hour planning standard.													

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FIGURE E.2 – WCD Planning Spreadsheet, WRIA 7
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WAC 173-182-365 Transmission pipelines and pipeline tank farms.

NOTE: A separate spreadsheet may be needed for each water crossing

NOTE: Planning standard calculations shown indicate resources listed on the WRRL and information provided through he Primary Response Contractor applications as of plan approval (conditional) date. This information is subject to change as equipment is acquired and relocated to meet the planning standards.

NOTE: This equipment does not necessarily represent the equipment that would be deployed in the event of a spill. This is not a response standard, this is only a representa ion of equipment that would be available based on the guidelines set for h in WAC 173-182 for planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual imes and performance will depend on traffic, weather, safety considera ions, and operator discre ion.

NOTE: For freshwater environments, shoreside storage can be identified to meet sixty-five percent of the storage requirements ou lined in the planning standards if the plan holder can demonstrate that recovered oil can be transported to the shoreside storage. For marine enviornments, shoreside storage can be identified to meet sixty-five percent of the storage requirements outlined in the planning standards if the plan holder can demonstrate that recovered oil can be transported to the shoreside storage. Access to fixed temporary storage is verified through plan review, letters of intent between companies, and primary response contractor applica ions.

NOTE: The 2 hour benchmark requirements are based on information submitted by he plan holder and calculated as outlined in WAC 173-182-365. A default of 2000 feet will be applied for each water crossing where the plan holder has not submitted information to calculate the 2 hour boom requirements.

Plan Holder: **Olympic Pipe Line Co.**
PRC: **MSRC, NRCES, CRC**

(b) (7)(F) [redacted]

Mutual Aid: **BP Cherry Point**
Shoreside storage available: BP Cherry Point and BP Portland as available

Category Definitions

Mobilization Times	Boom Type
Dedicated, plan holder owned = 30 mins	B1: boom > 42"
Dedicated, PRC owned = 1 hour	B2: boom between 18" and 42"
Non-Dedicated = 3 hour	B3: boom < 18"

Planning Transit Distance = [(hour benchmark - mobiliza ion ime) x transit speed]
Distance to Planning Standard = miles/nautical miles from staging area to the applicable planning standard.
Distance to Planning Standard < 1m: The equipment is staged within he planning standard area.
Product: oil group(s) in which skimmers can be effective. Defini ion - 33CFR155.1020
Assets in italics are available for a response however no transporta ion or support platform is associated to be counted toward he planning standards.

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Benchmark Calculations

Hr 2

Boom available at he spill source or downstream of the source could have arrived

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
NRCES	OPL Trailer w/skiff (12") (8")	Milton	0.5	402 m	w/ in range	-	-	2000	-	-	-	-	2
					2 Hour totals	**-**	**-**	**2000**	**-**	**-**	**-**	**-**	**2**

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 2 hour planning standard.

Hr 6

Boom: Additional 5,000 feet of boom available for containment, recovery or protec ion could have arrived.	**5000' boom required**
Recovery: Capacity to recovery he lesser of 10% of worse case spill volume or 12,500 barrels within 24-hour period could have arrived.	**526 bbls recovery required**
Storage: 1 times the EDRC	**473 bbls storage required**

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
					Equipment Remaining from 2 hour WIRA benchmark	-	-	-	-	-	-	-	-
NRCES	Lund skiff 6611	Milton	1	175 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	Small Boom Trailer (12")	Tacoma	1	175 m	w/ in range	-	-	4000	-	-	-	-	2
MSRC	Morris MI-30 w/tank (2 liquitotes)	Everett	1	175 m	w/ in range	-	-	-	987	-	-	28	1
MSRC	Aquaguard #1 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
NRCES	Response 1 (4"x6")	Seattle	1	175 m	w/ in range	-	-	1000	662	-	-	17	2
NRCES	Vac Truck (3x70 bbls)	Kent	1	175 m	w/ in range	-	-	-	-	-	-	210	2
NRCES	Lund skiff 6318	Tacoma	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Jon Boat #2	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Response 5	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Utility boat / small support	Everett	3	105 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	Aquaguard #2 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
MSRC	SWB 123 w/pushboat	Tacoma	3	105 m	w/ in range	-	60	-	904	-	-	400	2
MSRC	Trailer 20, (2"x4")	Everett	3	105 m	w/ in range	-	-	2900	-	-	-	-	-
MSRC	Trailer 45, Boom (18")	Seattle	3	105 m	w/ in range	-	-	3200	-	-	-	-	-
					6 Hour Totals	**-**	**60**	**11100**	**3273**	**-**	**-**	**703**	**22**

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 6 hour planning standard.

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Hr 12													
	Boom: Additional 20,000 feet of boom with at least 5,000 feet of boom for containment, protection or recovery could have arrived					**20,000' boom required**							
	Recovery: Capacity to recover the lesser of 15% of worst case spill volume or 36,000 barrels within 24-hr period could have arrived.					**263 bbls additional recovery required**							
	Storage: 2 times the EDRC (54,000 bbl total storage, 50% on water)					**237 bbls additional storage required**							
Organization	**Asset**	**Home Base**	**Mobilization Time (hr)**	**Planning transit distance**	**Distance to Planning Standard**	**Boom Type B1 (feet)**	**Boom Type B2 (feet)**	**Boom Type B3 (feet)**	**EDRC (BPD) shallow / calm capable**	**EDRC (BPD) open water capable**	**Product (Group II, III, IV, V)**	**On Water Storage (BBLS)**	**People**
				Available equipment remaining from 6 hour requirements		-	60	6100	2747	-	-	230	-
NRCES	OPL Trailer w/skiff (12") (8")	Bayview Terminal	0.5	402 m	w/ in range	-	-	2000	-	-	-	-	2
CRC	PFB Fire Station 6 (29-235) (12)	Portland	3	315 m	w/ in range	-	-	2000	-	-	-	-	-
CRC	Boom (12)	Portland	3	315 m	w/ in range	-	-	3000	-	-	-	-	-
CRC	Boom U ility Trailer (41-50)	Portland	3	315 m	w/ in range	-	-	2000	-	-	-	-	-
CRC	20' Alumaweld w/ 115hp	Portland	1	385 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund skiff	Anacortes	1	385 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund skiff 6457 (#2)	Anacortes	1	385 m	w/ in range	-	-	-	-	-	-	-	2
CRC	48' Trailer (35-107) (20")	Longview	3	315 m	w/ in range	-	5300	-	-	-	-	-	-
CRC	48' Trailer (35-105) (20")	Longview	3	315 m	w/ in range	-	4200	-	-	-	-	-	-
CRC	20' Alumaweld w/ 115hp	Portland	3	315 m	w/ in range	-	-	-	-	-	-	-	2
CRC	22' Boston Whaler w/ 150hp	Portland	3	315 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	SWB 19 w/ pushboat	Everett	3	315 m	w/ in range	-	60	-	905	-	-	400	2
MSRC	Minibarge PS#3	Tacoma	3	315 m	w/ in range	-	-	-	-	-	-	100	1
					12 Hour Totals	-	9620	25200	3652	-	-	730	15
Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 12 hour planning standard.													

Hr 24 & 48													
	Boom: Additional as required					**Additional boom as required**							
	Recovery: Capacity to recover the lesser of 20% of worst case spill volume or 48,000 barrels within 24-hr period could have arrived.					**263 bbls additional recovery required**							
	Storage: 3 times the EDRC (54,000 bbl total storage, 50% on water)					**1578 bbls additional on water storage required (3156 bbls total storage)**							
Organization	**Asset**	**Home Base**	**Mobilization Time (hr)**	**Planning transit distance**	**Distance to Planning Standard**	**Boom Type B1 (feet)**	**Boom Type B2 (feet)**	**Boom Type B3 (feet)**	**EDRC (BPD) shallow / calm capable**	**EDRC (BPD) open water capable**	**Product (Group II, III, IV, V)**	**On Water Storage (BBLS)**	**People**
				Available equipment remaining from 12 hour requirements		-	9620	5200	3389	-	-	493	-
NRCES	OPL Trailer w/skiff (12") (8")	Cas le Rock Station	0.5	822 m	w/ in range	-	-	2000	-	-	-	-	2
NRCES	Boom Trailer (6"x6")	Pasco	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
NRCES	Boom Trailer (6"x6")	Spokane	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
					24 Hour Totals	-	9620	9200	3389	-	-	493	2
Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 24 hour planning standard.													

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FIGURE E.2 – WCD Planning Spreadsheet, WRIA 23
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WAC 173-182-365 Transmission pipelines and pipeline tank farms.

NOTE: A separate spreadsheet may be needed for each water crossing

NOTE: Planning standard calculations shown indicate resources listed on the WRRL and information provided through the Primary Response Contractor applications as of plan approval (conditional) date. This information is subject to change as equipment is acquired and relocated to meet the planning standards.

NOTE: This equipment does not necessarily represent the equipment that would be deployed in the event of a spill. This is not a response standard, this is only a representation of equipment that would be available based on the guidelines set forth in WAC 173-182 for planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual imes and performance will depend on traffic, weather, safety considerations, and operator discretion.

NOTE: For freshwater environments, shoreside storage can be iden ified to meet sixty-five percent of the storage requirements outlined in the planning standards if he plan holder can demonstrate that recovered oil can be transported to the shoreside storage. For marine enviornments, shoreside storage can be identified to meet sixty-five percent of the storage requirements ou lined in the planning standards if the plan holder can demonstrate hat recovered oil can be transported to the shoreside storage. Access to fixed temporary storage is verified hrough plan review, letters of intent between companies, and primary response contractor applications.

NOTE: The 2 hour benchmark requirements are based on information submitted by the plan holder and calculated as outlined in WAC 173-182-365. A default of 2000 feet will be applied for each water crossing where the plan holder has not submitted information to calculate the 2 hour boom requirements.

Plan Holder: **Olympic Pipe Line Co.**

PRC: **MSRC, NRCES, CRC**

Worst Case Volumes:

(b) (7)(F) [redacted]

Mutual Aid: **BP Cherry Point**

Shoreside storage available: **BP Cherry Point and BP Portland as available**

Category Definitions

Mobilization Times	Boom Type
Dedicated, plan holder owned = 30 mins	**B1**: boom > 42"
Dedicated, PRC owned = 1 hour	**B2**: boom between 18" and 42"
Non-Dedicated = 3 hour	**B3**: boom < 18"

Planning Transit Distance = [(hour benchmark - mobiliza ion time) x transit speed]

Distance to Planning Standard = miles/nautical miles from staging area to the applicable planning standard.

Distance to Planning Standard < 1m: The equipment is staged within the planning standard area.

Product: oil group(s) in which skimmers can be effective. Definition - 33CFR155.1020

Assets in italics are available for a response however no transportation or support platform is associated to be counted toward he planning standards.

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Benchmark Calculations

Hr 2

Boom available at he spill source or downstream of the source could have arrived

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
NRCES	**OPL Trailer w/skiff (12") (8")**	**Castle Rock Station**	**0.5**	**52.5**	**w/ in range**	**-**	**-**	**2000**	**-**	**-**	**-**	**-**	**2**
					2 Hour totals	**-**	**-**	**2000**	**-**	**-**	**-**	**-**	**2**

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 2 hour planning standard.

Hr 6

Boom: Additional 5,000 feet of boom available for containment, recovery or protection could have arrived. — **5000' boom required**

Recovery: Capacity to recovery he lesser of 10% of worse case spill volume or 12,500 barrels within 24-hour period could have arrived. — **496 bbls recovery required**

Storage: 1 times the EDRC — **446 bbls storage required**

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
					Equipment Remaining from 2 hour WIRA benchmark								
CRC	PFB Fire Station 6 (29-235) (12)	Portland	3	105 m	w/ in range	-	-	2000	-	-	-	-	-
CRC	Boom (12)	Portland	3	105 m	w/ in range	-	-	3000	-	-	-	-	-
CRC	Boom U ility Trailer (41-50)	Portland	3	105 m	w/ in range	-	-	2000	-	-	-	-	-
CRC	20' Alumaweld w/ 115hp	Portland	1	175 m	w/ in range	-	-	-	-	-	-	-	2
CRC	22' Boston Whaler w/ 150hp	Portland	1	175 m	w/ in range	-	-	-	-	-	-	-	2
MSRC	Trailer 20 (2"x4")	Everett	3	105 m	w/ in range	-	-	2900	-	-	-	-	-
MSRC	Small Boom Trailer (12")	Tacoma	1	175 m	w/ in range	-	-	4000	-	-	-	-	2
MSRC	Morris MI-30 w/tank (2 liquitotes)	Everett	1	175 m	w/ in range	-	-	-	987	-	-	28	1
MSRC	Aquaguard #1 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
MSRC	Aquaguard #2 w/tank	Everett	1	175 m	w/ in range	-	-	-	360	-	-	24	1
MSRC	SWB 23 w/ pushboat	Portland	3	105 m	w/ in range	-	60	-	905	-	-	400	2
MSRC	RV CURLEW	Portland	3	105 m	w/ in range	-	-	-	3588	-	-	3	2
CRC	SWRB (29-227) (12")	Longview	3	105 m	w/ in range	-	-	400	2473	-	-	100	2
CRC	SWRB (29-226) (12")	Longview	3	105 m	w/ in range	-	-	400	2473	-	-	100	2
CRC	16' workboat (28-211)	Portland	3	105 m	w/ in range	-	-	-	-	-	-	-	2
CRC	16' workboat (28-210)	Portland	3	105 m	w/ in range	-	-	-	-	-	-	-	2
					6 Hour Totals	**0**	**60**	**14700**	**11146**	**0**	**0**	**679**	**21**
					TBL's Barge 1728 is also available for on water storage along the Columbia River	-	-	-	-	-	-	5356	3

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 6 hour planning standard.

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Hr 12		
	Boom: Additional 20,000 feet of boom with at least 5,000 feet of boom for containment, protection or recovery could have arrived	**20,000' boom required**
	Recovery: Capacity to recover the lesser of 15% of worst case spill volume or 36,000 barrels wi hin 24-hr period could have arrived.	**248 bbls additional recovery required**
	Storage: 2 times the EDRC (54,000 bbl total storage, 50% on water)	**223 bbls additional storage required**

Organization	Asset	Home Base	Mobilization Time (hr)	Planning transit distance	Distance to Planning Standard	Boom Type B1 (feet)	Boom Type B2 (feet)	Boom Type B3 (feet)	EDRC (BPD) shallow / calm capable	EDRC (BPD) open water capable	Product (Group II, III, IV, V)	On Water Storage (BBLS)	People
		Available equipment remaining from 6 hour requirements				-	60	9700	6157	-	-	233	-
NRCES	OPL Trailer w/skiff (12") (8")	Milton	0 5	402 m	w/ in range	-	-	2000	-	-	-	-	2
CRC	SWB (29-230)	Longview	3	315 m	w/ in range	-	-	-	-	-	-	100	-
MSRC	Trailer 45, Boom (18")	Seattle	3	385 m	w/ in range	-	-	3200	-	-	-	-	-
MSRC	Trailer 66, Boom (18")	Anacortes	3	385 m	w/ in range	-	-	2900	-	-	-	-	-
MSRC	Trailer 77, Boom (18")	Bellingham	3	385 m	w/ in range	-	-	3200	-	-	-	-	-
MSRC	Trailer 60, Boom (18")	Tacoma	3	385 m	w/ in range	-	-	4000	-	-	-	-	-
NRCES	Canflex Bladder	South Park	3	315 m	w/ in range	-	-	-	-	-	-	100	-
NRCES	Lund skiff 6318	Tacoma	3	315 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Jon Boat #2	Everett	3	315 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Response 5	Everett	3	315 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Utility boat / small support	Everett	3	315 m	w/ in range	-	-	-	-	-	-	-	2
CRC	48' Trailer (35-107) (20")	Longview	3	315 m	w/ in range	-	5300	-	-	-	-	-	-
CRC	48' Trailer (35-105) (20")	Longview	3	315 m	w/ in range	-	4200	-	-	-	-	-	-
CRC	20' Alumaweld w/ 115hp	Por land	3	315 m	w/ in range	-	-	-	-	-	-	-	2
CRC	22' Boston Whaler w/ 150hp	Por land	3	315 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund skiff	Anacortes	1	385 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Lund skiff 6457 (#2)	Anacortes	1	385 m	w/ in range	-	-	-	-	-	-	-	2
NRCES	Agua-Guard RBS-10	South Park	1	385 m	w/ in range	-	-	-	662	-	-	-	-
NRCES	Vikoma Star Skimmer	South Park	1	385 m	w/ in range	-	-	-	888	-	-	-	-
NRCES	Vac Truck (3x70 bbls)	Kent	1	385 m	w/ in range	-	-	-	-	-	-	210	2
MSRC	MiniBarge	Tacoma	3	315 m	w/ in range	-	-	-	-	-	-	100	-
					12 Hour Totals	-	9560	25000	7707	-	-	743	20

Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 12 hour planning standard.

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Hr 24 & 48													
	Boom: Addi ional as required					**Additional boom as required**							
	Recovery: Capacity to recover the lesser of 20% of worst case spill volume or 48,000 barrels within 24-hr period could have arrived.					**497 bbls additional recovery required**							
	Storage: 3 times the EDRC (54,000 bbl total storage, 50% on water)					**669 bbls additional storage required**							
Organization	**Asset**	**Home Base**	**Mobilization Time (hr)**	**Planning transit distance**	**Distance to Planning Standard**	**Boom Type B1 (feet)**	**Boom Type B2 (feet)**	**Boom Type B3 (feet)**	**EDRC (BPD) shallow / calm capable**	**EDRC (BPD) open water capable**	**Product (Group II, III, IV, V)**	**On Water Storage (BBLS)**	**People**
Available equipment remaining from 12 hour requirements:						-	9600	5000	7659	-	-	520	-
MSRC	MiniBarge PS#1	Anacortes	3	735 m	w/ in range	-	-	-	-	-	-	100	-
MSRC	Minibarge PS#2	Anacortes	3	735 m	w/ in range	-	-	-	-	-	-	100	-
NRCES	OPL Trailer w/skiff (12") (8")	Bayview Terminal	0.5	822 m	w/ in range	-	-	2000	-	-	-	-	2
NRCES	Boom Trailer (6"x6")	Pasco	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
NRCES	Boom Trailer (6"x6")	Spokane	1	805 m	w/ in range	-	-	1000	-	-	-	-	-
24 Hour Totals						-	9600	9000	7459	-	-	720	2
Based on location of contracted assets, mobization time, transit distance, and distance to planning standard, plan holder is able to meet the 24 hour planning standard.													

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APPENDIX F
SHORELINE PROTECTION AND CLEANUP

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F.1 SHORELINE PROTECTION GUIDANCE

Shoreline protection procedures are conducted to prevent oil impact to shoreline and reduce the impact on wildlife. Booms, skimmers and dispersants are the preferred methods. These methods can be used to control or contain floating oil slicks on the water away from marshes. Shoreline protection efforts include booms, sorbents and earthen barriers. Sorbents are effective on mudflats when placed on the shoreline before oil contacts the shore. A description of shoreline types is presented in **FIGURE F.1**. Specific shoreline protection and cleanup measures, for areas possibly impacted by a potential spill from the Pipeline are discussed in this subsection. **FIGURE F.2** provides a summary of shoreline and terrestrial cleanup techniques. **FIGURE F.3** provides a shoreline cleanup technique selection guide. Additional information may be obtained from the *Northwest Area Contingency Plan*.

F.2 SHORELINE AND TERRESTRIAL CLEANUP

F.2.1 General

In the event that terrestrial areas become oiled or that oil becomes stranded on a shoreline, cleanup operations should be undertaken to reduce the environmental effects of the oil**.** Before terrestrial and shoreline cleanup plans are implemented they require Unified Command approval. Assessment teams comprised of personnel from the appropriate agencies, Company personnel, and consultants can be utilized to determine the most appropriate cleanup method. Olympic will initially resource shoreline cleanup equipment and personnel through its Primary Response Contractor, NRCES.

In most instances, cleanup efforts are not subject to the same time constraints as containment, recovery, and protection operations. As a result, better planning and greater attention to detail are possible. The exception is where there is a high probability of stranded oil becoming mobilized again and migrating to previously unaffected areas. In this case, implement cleanup operations as soon as possible. If time permits, consider the following items in detail:

- Document the location, degree, and/or extent of oil conditions,
- Evaluate all environmental, cultural, economic, and political factors,
- Select optional cleanup technique,
- Mitigate physical/environmental damage associated with cleanup operations,
- Cost-effectiveness,
- Net environmental benefit assessment.

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The shoreline or terrestrial oil conditions can range from those which require immediate and thorough cleanup to lightly oiled areas where no cleanup may be the most environmentally sound option. Factors that influence technique selection and whether or not cleanup will be required include:

- Oil type and amount,
- Sensitivity,
- Substrate or shoreline type,
- Intrusive nature of the techniques,
- Shoreline accessibility,
- Exposure.

Before initiating cleanup activities, assess the net environmental benefits of a proposed cleanup operation for all affected shorelines.

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FIGURE F.1 - DESCRIPTION OF SHORELINE TYPES

TYPES	ESI #	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Exposed Rocky Cliffs	1A	• The intertidal zone is steep (greater than a 30° slope), with very little width. • Sediment accumulations are uncommon and usually ephermeral, since waves remove the debris that has slumped from the eroding cliffs. • They are often found interspersed with other shoreline types. • There is a strong vertical zonation of intertidal biological communities.	• Oil is held offshore by waves reflecting off the steep cliff. • Any oil that is deposited is rapidly removed from exposed faces. • The most resistant oil would remain as a patchy band at or above the high-tide line. • Impacts to intertidal communities are expected to be of short duration. • An exception would bewhere heavy concentrations of light refined product (e.g. No. 2 fuel oil) came ashore very quickly.	• Cleanup is not usually required • Access can be difficult and dangerous.

Exposed Sea Walls and Piers	1B	• Seawalls and piers are particularly common in developed areas, providing protection to residential and industrial developments.
		• They are also common along inlets, urbanized areas, and developed beachfront sites.
		• They are composed of concrete and stone, wooden, or metal bu kheads and wooden pilings.
			• Oil would percolate between the joints of the structures.
			• Oil would coat the intertidal areas of solid structures.
			• Biota would be damaged or killed under heavy accumulations.
				• High-pressure spraying may be required in order to:
				  • Remove oil;
				  • Prepare substrate for recolonization of barnacle and oyster communities;
				  • Minimize aesthetic damage;
				  • Prevent the chronic leaching of oil from the structure.

Exposed Wave-Cut Platfoms	2	• The intertidal zone consists of a flat rock bench of highly variable width. • The shoreline may be backed by a steep scarp or low bluff. • There may be a narrow, perched beach of gravel- to boulder-sized sediments at the base of the scarp. • The platform surface is irregular and tidal pools are common. • Small accumulations of gravel can be found in the tidal pools and crevices in the platform. • Pockets of sandy "tidal flats" can occur on the platform in less exposed settings. • These habitats can support large populations of encrusting animals and plants, with rich tidal pool communities.	• Oil will not adhere to the rock platform, but rather be transported across the platform and accumulate along the high-tide line. • Oil can penetrate and persist in the beach sediments, if present. • Persistence of oiled sediments is usually short term, except in wave shadows or larger sediment accumulations.	• Cleanup is usually not required. • Where the high-tide areas is accessible, it may be feasible to remove heavy oil accumulations and oiled debris.

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FIGURE F.1 - DESCRIPTION OF SHORELINE TYPES, CONTINUED

TYPES	ESI #	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Fine/Medium-Grained Sandy Beaches	3	• These beaches are generally flat, wide, and hard-packed. • They are commonly backed by dunes or seawalls along exposed, outer coasts. • Along sheltered bays, they are narrower, often fronted by tidal flats. • Upper beach fauna are scarce.	• Light oil accumulations will be deposited as oily swashes or bands along the upper intertidal zone. • Heavy oil accumulations will cover the entire beach surface, although the oil will be lifted off the lower beach with the rising tide. • Maximum penetration of oil into fine-grained sand will be 10 centimeters (cm). • Burial of oiled layers by clean sand within the first few weeks will be less than 30 cm along the upper beach face. • Organisms living in the beach sands may be killed either by smothering or by lethal oil concentrations in the interstitial water. • Shorebirds may be killed if oiled, though they may shift to clean sites.	• These beaches are among the easiest beach types to clean. • Cleanup should concentrate on the removal of oil from the upper swash zone after all oil has come ashore. • Removal of sand from the beach should be minimal to avoid erosion problems; special caution is necessary in areas backed by seawalls. • Activity through oiled and dune areas should be severely limited, to prevent contamination of clean areas. • Manual cleanup, rather than road graders and front-end loaders, is advised to minimize the volume of sand removed from the shore and requiring disposal. • All efforts should focus on preventing the mixture of oil being pushed deeper into the sediments by vehicle and foot traffic.
Coarse-Grained Sand/Gravel Beaches	4	• These beaches are moderate-to-steep, of variable width, and have soft sediments. • They are commonly backed by dunes seawalls along exposed, outer coasts. • Generally species density and diversity is low.	• Light oil will be deposited primarily as a band along the high-tide line. • Under very heavy accumulations, oil may spread across the entire beach face, though the oil will be lifted off the lower beach with the rising tide. • Penetration of oil into coarse-grained sand can reach 25 cm. • Burial of oil layers by clean sand can be rapid, and up to 60 cm or more. • Burial over one meter is poss ble if the oil comes ashore at the start of the disposition period. • Biological impacts include temporary declines in faunal populations, which can also affect feeding shorebirds.	• Remove oil primarily from the upper swash lines. • Removal of sediment should be limited to avoid erosion problems. • Mechanical reworking of the sediment into the surf zone may be used to release the oil without removal. • Activity in the oiled sand should be limited to prevent mixing oil deeper into the beach. • Use of heavy equipment for oil/sand removal may result in the removal of excessive amounts of sand; manual cleanup may be more effective.

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FIGURE F.1 - DESCRIPTION OF SHORELINE TYPES, CONTINUED

TYPES	ESI #	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Mixed Sand and Gravel Beaches	5	• Moderately sloping beach composed of a mixture of sand (greater than 20%) and gravel (greater than 25%). • The high-tide berm area is usually composed of sand or fine gravel (pebbles to cobbles), whereas the lower part of the beach is coarser, with cobbles to boulders. • Because of the mixed sediment sizes, there may be zones of sand, pebbles, or cobbles. • Because of the sediment mobility and desiccation of exposed beaches, there are low densities of attached animals and plants. • The presence of attached algae, mussels, and barnacles indicated beaches that are relatively sheltered, with the more stable substrate supporting a richer biota.	• During small spills, oil will be deposited along and above the high-tide swash. • Large spills will spread across the entire intertidal area. • Oil penetration into the beach sediments may be up to 50 cm; however, the sand fraction can be quite mobile, and oil behavior is much like on a sand beach if the sand fraction exceeds about 40%. • Burial of oil may be deep at and above the high-tide line, where oil tends to persist, particularly where beaches are only intermittently exposed to waves. • On sheltered beaches, extensive pavements of asphalted sediments can form if there is no removal of heavy oil accumulations, because most of the oil remains on the surface. • Once formed, pavements are very stable and can persist for many years. • Oil can be stranded in the coarse sediments on the lower part of the beach, particularly if the oil is weathered or emulsified.	• Remove heavy accumulations of pooled oil from the upper beach face. • All oiled debris should be removed. • Sediment removal should be limited as much as possible. • Low-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents. High-pressure spraying should be avoided because of potential for transporting the finer sediments (sand) to the lower intertidal or subtidal zones. • Mechanical reworking of oiled sediments from the high-tide zone to the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidence by storm berms). However, oiled sediments should not be relocated below the mid-tide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.
Gravel Beaches	6A	• Gravel beaches are composed of sediments ranging in size from pebbles to boulders. • They can be very steep, with multiple wave-built berms forming the upper beach. • Attached animals and plants are usually restricted to the lowest parts of the beach, where sediments are less mobile.	• Deep penetration and rapid burial of stranded oil is l kely on exposed beaches. • On exposed beaches, oil can be pushed over the high tide and storm berms, pooling and persisting above the normal zone of wave wash. • Long-term persistence will be controlled by the depth of penetration versus the depth of routine reworking by storm waves. • On relatively sheltered beaches, formation of asphalt pavements is l kely where accumulations are heavy.	• Heavy accumulations of pooled oil should be quickly removed from the upper beach. • All oiled debris should be removed. • Sediment removal should be limited as much as possible. • Low- to high-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents. • Mechanical reworking of oiled sediments from the high-tide zone to the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidence by storm berms). However, oiled sediments should not be relocated below the mid-tide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.
Rip Rap	6B	• Riprap structures are composed of cobble to boulder-size rocks. • Riprap structures are placed for shoreline protection and inlet stabilization. • Biota on the riprap may be plentiful and varied.	• On riprap structures, deep penetration of oil between boulders is l kely. • If oil is left uncleaned, it may become asphalted. • Resident fauna and flora may be killed by the oil.	• It may be necessary to remove heavily oiled riprap and replace it.

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FIGURE F.1 - DESCRIPTION OF SHORELINE TYPES, CONTINUED

TYPES	ESI #	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Exposed Tidal Flats	7	• The are compose primarily of sand and mud. • The presence of sand indicates that tidal or wind-driven currents and waves are strong enough to mobilize the sediments. • They are always associated with another shoreline type on the landward side of the flat. • The sediments are water-saturated, with only the topographically higher ridges drying out during low tide. • Biological utilization can be very high, with large numbers of infauna and heavy use by birds for roosting and foraging.	• Oil does not usually adhere to the surface of exposed tidal flats, but rather moves across the flat and accumulates at the high-tide line. • Deposition of oil on the flat may occur on a falling tide if concentrations are heavy. • Oil does not penetrate the water-saturated sediments. • Biological damage may be severe, primarily to infauna, thereby reducing food sources for birds and other predators.	• Currents and waves can be very effective in natural removal of oil. • Cleanup is very difficult (and poss ble only during low tides). • The use of heavy machinery should be restricted to prevent mixing of oil into the sediments. • On sand flats, oil will be removed naturally from the flat and deposited on the adjacent beaches where cleanup is more feas ble.
Sheltered Rocky Shores	8A	• They consist of bedrock shores of variable slope (from vertical cliffs to wide, rocky ledges) that are sheltered from exposure to most wave and tidal energy. • The wider shores may have some surface sediments, but the bedrock is the dominant substrate type. • Species density and diversity vary greatly, but barnacles, snails, mussels, clams, periwinkles, amphipods, polychaetes, rockweed, and crabs are often very abundant.	• On rocky shores, oil will adhere readily to the rough rocky surface, particularly along the high-tide line, formed a distinct oil band. • Fractures in the bedrock will be sites of pooling and oil persistence. • Even on wide ledges, the lower intertidal zones usually stays wet (particularly when algae covered), preventing oil from adhering to the rock surface. • Heavy and weathered oils can cover the upper zone with little impacts to the rich biological communities of the lower zone. • Where surface sediments are abundant, oil will penetrate into the crevices formed by the surface rubble and pool at the contact of the sediments and the surface. • Where the rubble is loosely packed, oil will penetrate deeply, causing long-term contamination of the subsurface sediments. • Fresh oil and light refined products have high acute toxicities that can affect attached organisms after even short exposures.	• Low- to high-pressure spraying at ambient water temperatures is most effective when the oil is fresh. • Extreme care must be taken not to spray in the biologically rich lower intertidal zone or when the tidal level reaches that zone. • Cutting of oiled, attached algae is not recommended; tidal action will eventually float this oil off, so sorbent booms should be deployed.

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FIGURE F.1 - DESCRIPTION OF SHORELINE TYPES, CONTINUED

TYPES	ESI #	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Sheltered Tidal Flats	9	• They are composed primarily of silt and clay. • They are present in calm-water habitats, sheltered from major wave activity, and frequently fronted by marshes. • Wave energy is very low, although there may be strong tidal currents active on parts of the flat and in channels across the flat. • The sediments are very soft and cannot support even light foot traffic. • There are usually large populations of clams, worms, and snails. • Bird life is seasonably abundant.	• Oil does not usually adhere to the surface of sheltered tidal flats, but rather moves across the flat and accumulates at the high-tide line. • Deposition of oil on the flat may occur on a failing tide if concentrations are heavy. • Oil will not penetrate the water-saturated sediments at all. • In areas of high suspended sediments, sorption of oil can result in contaminated sediments that can be deposited on the flats. • Biological damage may be severe.	• These are high-priority areas necessitating the use of spill protection devices to limit oil spill impact; deflection or sorbent booms and open water skimmers should be used. • Cleanup of the flat surface is very difficult because of the soft substrate and many methods may be restricted. • Manual operations and deployment of sorbents from shallow-draft boats may be helpful.
Fringing and Extensive Salt Marshes	10A	• Marshes are intertidal wetlands containing emergent, herbaceous vegetation. • Width of the marsh can vary widely, from a narrow fringe to extensive. • They are relatively sheltered from waves and strong tidal currents. • Resident flora and fauna are abundant and consist of numerous species. • Marshes provide a nursery ground for numerous fish species. • Bird life is seasonably abundant.	• Oil adheres readily to marsh vegetation. • The band of coating will vary widely, depending upon the tidal stage at the time oil slicks are in the vegetation. There may be multiple bands. • Large slicks will persist through multiple tidal cycles and coat the entire stem from the high-tide line to the base. • If the heavy vegetation is thick, heavy oil coating will be restricted to the outer fringe, with penetration and lighter oiling to the limit of tidal influence. • Medium to heavy oils do not readily adhere or penetrate the fine sediments, but they can pool on the surface an din burrows. • Light oils can penetrate the top few centimeters of sediments and deeply into burrows and cracks (up to one meter).	• Under light oiling, the best practice is to let the areas recover naturally. • Heavy accumulation of pooled oil can be removed by vacuum, sorbents, or low-pressure flushing. During flushing, care must be taken to prevent transporting oil to sensitive areas down slope or along shore. • Cleanup activities should be carefully supervised to avoid vegetation damage. • Any cleanup activity <u>must not</u> mix the oil deeper into the sediments. Trampling of the roots must be minimized. • Cutting of oiled vegetation should only be considered when other resources present are at great risk from leaving the oiled vegetation in place.

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FIGURE F.2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
Removal				
1. Manual Removal	Hand tools (scrapers, wire brushes, shovels, cutting tools, wheel barrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/or access is limited.	Equipment Misc. hand tools Personnel 10-20 workers	• Poor access • Highly sensitive areas	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments
2. Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.			
2a. Bulldozer/Front-end Loader	Used to recover moderately to heavily oiled sediments using a bulldozer to push sediments into piles for pickup by front-end loader. Front-end loader may work alone to recover sediments directly.	Equipment 1 bulldozer 2 front-end loaders Personnel 2-4 workers plus equipment operators	• Very poor trafficability • Limited access • Highly sensitive areas • Light or sporadic oil conditions	• Removes upper 2 to 12 inches of sediments • Removes shallow organisms but recolonization is typically rapid • Excessive sediment removal can cause erosion
2b. Backhoe	Used to recover surface or subsurface oiled sediments on flat or steeply sloped areas by scooping up sediments and placing directly into dump trucks or in piles for subsequent removal.	Equipment 1-2 backhoes 4-6 dump trucks Personnel 2-4 workers plus equipment operators	• Limited access • Highly sensitive areas • Unstable slopes • Light or sporadic oil conditions	• Removes minimum of 6 to 12 inches of sediments • Removes shallow organisms but recolonization is typically rapid • Can cause erosion and slope instability
3. Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	Equipment Misc. hand tools Misc. sorbents Personnel 2-10 workers	• Poor access • Highly sensitive areas • Heavy oil conditions	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments

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

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
4. Vacuums/Pumps/ Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	Equipment 1-2 50- to 100-bbl Vacuum trucks w/hoses 1-2 nozzle screens or skimmer heads Personnel 2-6 workers plus truck operators	• Poor access • Thin oil accumulations or light sheens • Highly sensitive shoreline areas • Excessive suction lift required	• Typically does not remove all oil • 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.	Equipment 1-5 100- to 200-gpm pumping systems 1 100-ft perforated header hose per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 6-8 workers per system	• Highly permeable substrate • Highly sensitive areas • Poor access • Highly weathered oil or thin films or coatings • Typically does not remove all oil	• Can impact clean downgradient areas • Can displace some surface organisms if present • Sediments transported into water can affect water quality
6. Flushing	Water streams at low to moderate pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments through agitation and direct contact. Oil is flushed back into the water or a collection point for subsequent recovery. May also be used to flush out oil trapped by shoreline or aquatic vegetation.	Equipment 1-5 50- to 100-gpm/ 100-psi pumping systems with manifold 1-4 100-ft hoses and nozzles per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 8-10 workers per system	• Highly permeable substrate • Highly sensitive areas • Poor access • Highly weathered oil or thin films or coatings • Typically does not remove all oil	• Can impact clean downgradient areas • Will displace many surface organisms if present • Sediments transported into water can affect water quality • Hot water can be lethal to many organisms • Can increase oil penetration depth

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

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
7. Spot (High Pressure) Washing	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where flushing is ineffective. Oil is directed back into water or collection point for subsequent recovery.	Equipment 1-5 1,200- to 4,000-psi units with hose and spray wand 1-2 100-ft containment booms per unit 1 oil recovery device per unit Personnel 2-4 workers per unit	• Poor access • Highly sensitive area • Safety hazard from high pressure water stream • Relatively soft or unconsolidated substrates	• 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 contain and recover oil as it leaches from the sediments.	Equipment 1,000-2,000 ft sorbent/snare boom 200-400 stakes or anchor systems Personnel 4-10 workers	• Poor access • High currents/waves • Lightly oiled sediments • Oil removal process is slow	• Significant amounts of oil can remain on the shoreline for extended periods of time
9. Sediment Tilling	Mechanical equipment or hand tools are used to till light to moderately oiled surface sediments to maximize natural degradation processes.	Equipment 1 tractor fitted with tines, dicer, ripper blades, etc. or 1-4 rototillers or 1 set of hand tools Personnel 2-10 workers	• Poor access • Heavily oiled area • Highly sensitive area • Oil can be mixed deeper into substrate	• Significant amounts of oil can remain on the shoreline for extended periods of time • Disturbs surface sediments and organisms
10. In Situ Bioremediation	Fertilizer is applied to lightly or moderately oiled areas to enhance microbial growth and subsequent biodegradation of oil.	Equipment 1-2 fertilizer applicators 1 tilling device if required Personnel 2-4 workers	• May cause algal bloom and short-term water quality problems • Heavily oiled areas	• Significant amounts of oil can remain on the shoreline for extended periods of time • Can disturb surface sediments and organisms

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

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
11. Log/Debris Burning	Oiled logs, driftwood, vegetation, and debris are burned to minimize material handling and disposal requirements. Material should be stacked in tall piles and fans used to ensure a hot, clean burn.	Equipment 1 set of fire control equipment 2-4 fans 1 supply of combustion promoter Personnel 2-4 workers	• Local air quality regulations • Close proximity to populated areas • High wind conditions • Heavy precipitation	• 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	• Heavy oil conditions • Highly sensitive shorelines • High oil remobilization potential	• Oil may persist for significant periods of time • Remobilized oil or sheens may impact other areas • Higher probability of impacting wildlife

1 - Per 1,000 feet of shoreline or oiled area. Potential sources of equipment are provided in Section 5 0.
2 - In addition to fire and explosion hazard.

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F.2.2 Cleanup Technique Selection

Shoreline

In the event the techniques recommended above do not apply to a particular spill situation along the pipeline, other techniques should be considered for implementation. The other techniques that may be applicable are generally dependent on the:

- Oil type.
- Oiling conditions/degree of impact.
- Environmental, safety, and political considerations.
- Unusual circumstances the may be present at the time of the spill.

The following guidelines can be used to identify the most appropriate cleanup technique(s) for that situation.

Selection of an appropriate shoreline cleanup technique is primarily dependent on the following factors:

- **Substrate type** - Finer grained sediments typically require different techniques than coarse grained sediments and sediment type can affect trafficability (i.e., ability to traverse the area without losing traction) for heavy equipment.
- **Oil conditions** - Heavier oil conditions and larger areas may require more intrusive or mechanical methods, whereas lighter conditions may not require any form of cleanup.
- **Slope** - Heavy equipment use may not be appropriate on steeper or unstable banks.
- **Shoreline sensitivity** - Intrusive techniques may create a greater impact than the oil itself.
- **Penetration depth** - Significant penetration can reduce the effectiveness of several techniques.

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FIGURE F.3 includes a shoreline cleanup technique selection guide.

These figures should only be used as a guide to identify the most appropriate techniques based on a limited number of factors and not a definitive list of techniques that can be used for selected situations.

A number of other factors can influence technique selection and result in techniques other than those identified in the figures as the most appropriate for a given situation. Final selection of cleanup techniques should be conducted in consultation with the state and federal OSCs, the appropriate natural resource trustees, if applicable, and the particular landowner(s) or manager(s) prior to implementation.

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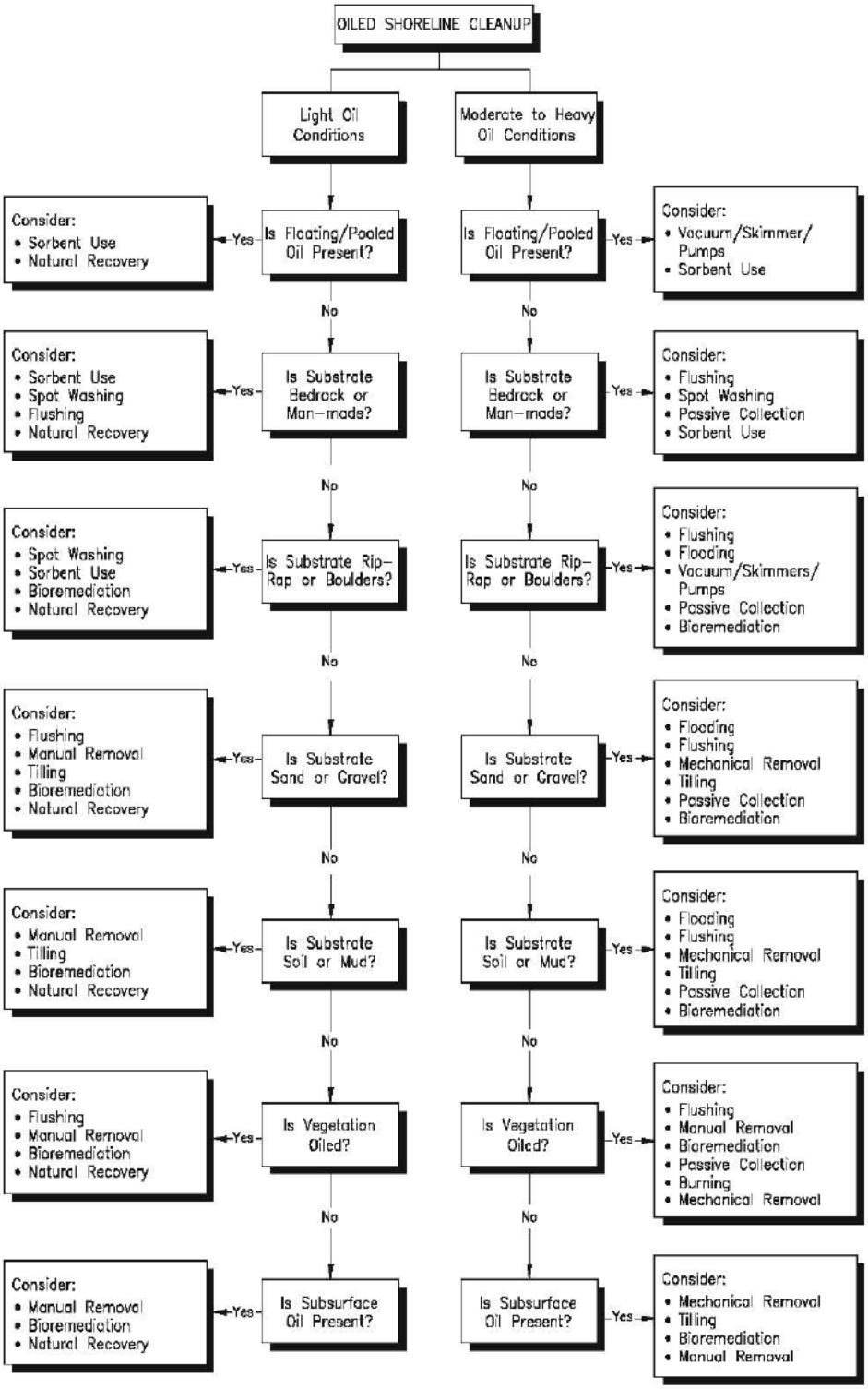
FIGURE F.3 - SHORELINE CLEANUP TECHNIQUE SELECTION GUIDE



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APPENDIX G
CROSS-REFERENCE/RESPONSE PLAN COVER SHEET

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX _____2
FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE _____18
FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX _____23

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX

ECOLOGY REQUIREMENTS (WAC 173-182-140)	
Plan Content Requirements	**LOCATION IN THIS PLAN**
(1) At least once annually, plan holders shall review the plan for accuracy and either:	
(a) Update and distribute the amended page(s) of the plan to ecology for review and approval; or	Section 1.2
(b) If no plan changes are needed, send a letter to ecology confirming that the existing plan is still accurate.	
(2) If there is a temporary, significant change to response readiness, the plan holder shall notify ecology in writing within twenty-four hours and provide a schedule for the prompt return of the plan to full operational status. Changes which are considered significant, include loss of equipment that affects the planning standards provided in the plan, or permanent loss of initial response personnel listed in command and general staff ICS positions provided in the plan or changes in normal operating procedures. A facsimile or electronic mail will be considered sufficient written notice.	Section 1.2
(3) Failure to notify ecology of significant changes shall be considered noncompliance with this chapter.	
(4) If the change to the plan is permanent, the plan holder then shall have thirty calendar days to distribute the amended page(s) of the plan to ecology for review	Figure 1.2
(5) If ecology finds that, as a result of a change, the plan no longer meets approval criteria; ecology may place conditions on approval or revoke approval of the plan.	
ECOLOGY REQUIREMENTS (WAC 173-182-145)	
(1) Every plan holder, including each person whose vessel or facility enrolls in coverage under an umbrella plan, is required to implement the Washington approved plan throughout the response to a spill and drill. A decision to use a different plan must first be approved by the state and federal on-scene coordinators.	
(2) Approval from ecology must be received before any significant aspect of the spill response is conducted in a manner contrary to the plan unless:	Figure 1.3A, Figure 1.3B
(a) Such actions are necessary to protect human health and safety; or	Figure 1.3A, Figure 1.3B
(b) Such actions must be performed immediately in response to unforeseen conditions to avoid additional environmental damage; or	Figure 1.3A, Figure 1.3B
(c) State and federal on-scene coordinators have directed such actions.	Figure 1.3A, Figure 1.3B

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-150)	
Plan holders are required to conduct post-spill review procedures to review both the effectiveness of the plan and make plan improvements. Debriefs with ecology and other participating agencies and organizations may be appropriate if: Unified command has been established during a spill; and are required when significant plan updates are identified or significant lessons can be recorded and implemented.	Section 8.2, Figure 8.3
ECOLOGY REQUIREMENTS (WAC 173-182-220)	
(1) Each plan shall contain a written statement binding the plan holder to its use. Form number ECY 070-217 may be used. The binding agreement shall be signed by the owner or operator, or a designee with authority to bind the owners and operators of the facility or vessel covered by the plan. The agreement is submitted with the plan and will include the name, address, phone number, and if appropriate the e-mail address, and web site of the submitting party.	Section 1.5
(2) In the statement, the signator will:	
(a) Verify acceptance of the plan and commit to a safe and immediate response to spills in Washington;	Section 1.5
(b) Commit to having an incident commander in the state within six hours after notification of a spill;	Section 1.5
(c) Commit to the implementation and use of the plan during a spill, and to the training of personnel to implement the plan; and	Section 1.5
(d) Verify authority and capability of the plan holder to make necessary and appropriate expenditures in order to implement plan provisions.	Section 1.5
ECOLOGY REQUIREMENTS (WAC 173-182-230)	
(1) Contingency plans must include all of the content in this section.	
(2) In Washington state, the NWACP serves as the statewide master oil and hazardous substance contingency plan required by RCW 90.56.060. Plan holders shall write plans that refer to and are consistent with the NWACP.	
(3) All contingency plans must include the following:	
(iii) Each plan shall state the federal or state requirements intended to be met by the plan.	Section 1.1
(b) Each plan shall state the size of the worst case spill	
(iii) For transmission pipelines, more than one worst case spill volume for different line sections on the entire pipeline may be submitted to ecology for consideration.	Appendix E.7
(ii) For vessel umbrella plans, a worst case volume for each port of operation may be submitted to ecology for consideration, if the operations of enrolled vessels differ by port.	N/A
(iii) For multiple facilities using a single umbrella plan, separate worst case spill volumes are required for each facility.	N/A

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-230)	
(c) Each plan shall have a log sheet to record revisions and updates to the plan. The log sheet shall identify each section amended, including the date of the amendment, verification that ecology was notified and the name of the authorized person making the change. A description of the amendment and its purpose shall also be included in the log sheet, or filed as an amendment letter to be inserted in the plan immediately after the log sheet.	Record of Amendments
(d) Each plan shall have a cross-reference table reflecting the locations in the plan of each component required by this chapter.	Figure G.1
(e) Each plan shall have the PRC's name, address, phone number, or other means of contact at any time of the day.	Figure 3.5
(i) A contract or letter summarizing the terms of the contract signed by the PRC, shall be included in the plan.	Appendix B
(ii) If the contract is not submitted, that document shall be available for inspection, if requested by the department.	
(iii) For mutual aid agreements that a plan holder relies on to meet the planning standards, the plan shall include a copy of the agreement and describe the terms of that document in the plan.	Appendix B
(iv) If a plan holder relies on a PRC or other contractor to staff ICS positions for the spill management team, then the commitment must be specified in writing.	
(f) Each plan must contain the procedures to track and account for the entire volume of oil recovered and oily wastes generated and disposed of during spills. The responsible party must provide these records to ecology upon request.	Section 5.5
(4) Additional facility plan content. Facility plans shall include:	
(a) The name, location, type and address of the facility;	Figure 1.3A, Figure 1.3B
(b) Starting date of operations;	Figure 1.3A, Figure 1.3B
(c) Description of the operations covered by the plan:	
(i) List the oil handling operations that occur at the facility location.	Figure 1.3A, Figure 1.3B
(ii) List by group and amount the oil handled.	Figure 1.3A, Figure 1.3B
(iii) Include a written description and map indicating site topography, storm water and other drainage systems, mooring areas, pipelines, tanks, and other oil processing, storage, and transfer sites and operations.	Figure 1.4 and Geographic Response Plans
(iv) A description of the geographic area that could be impacted from a spill at the location based on a forty 0eight hour worst case spill trajectory analysis.	Appendix E.7
(5) Additional vessel plan content:	
(a) Name of each vessel covered under the plan;	N/A
(b) The name, location, and address of the owner or operator;	N/A
(c) Official identification code or call sign;	N/A

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-230)	
(d) Country of registry;	N/A
(e) All ports of call or areas of expected operation in Washington waters;	N/A
(f) Type of oil(s) handled (group);	N/A
(g) Oil volume capacity by group;	N/A
(h) Description of the operations covered by the plan. Include a written description and diagram indicating cargo, fuel, and ballast tanks and piping, power plants, and other oil storage and transfer sites and operations.	N/A
(6) Special exemptions for vessel umbrella plans shall, at a minimum, include the following:	
(a) In lieu of providing vessels names, call signs and country of registry, vessel umbrella plan holders shall maintain accurate enrollment or member lists with vessel specific information provided by covered vessels and shall make the information available to ecology upon request.	N/A
(b) Umbrella plans for vessels shall include a list of the types of vessels and the typical oil types by group and volumes. In addition, vessel diagrams indicating cargo, fuel, and ballast tanks and piping, power plants, and other oil storage and transfer sites and operations shall be available for inspection by ecology. The procedure for the plan holder to acquire vessel diagrams needs to be documented in the plan.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-240)	
(1) Each plan shall contain a field document which lists time critical information for the initial emergency phase of a spill. The owner or operator of the covered vessel or facility shall make the field document available to personnel who participate in oil handling operations and shall keep the field document in key locations at facilities, docks, on vessels and in the plan. The locations where field documents are kept must be listed in the plan, provided that vessel umbrella plan holders shall not be subject to enforcement if the owner or operator of an enrolled vessel fails to keep the field documents in the location specified in the plan. Umbrella vessel plans shall include procedures to ensure each vessel covered by the plan is provided the field document prior to entering Washington waters. This can include by electronic means.	Figure 1.2
(2) At a minimum, the field document shall contain:	
(a) A list of the procedures to detect, assess and document the presence and size of a spill;	Section 2
(b) Spill notification procedures and a call out list that meets the requirements in WAC 173-182-260; and	Figure 2.1
(c) A checklist that identifies significant steps used to respond to a spill, listed in a logical progression of response activities.	Figure 2.1

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-250)	
(1) Plan holders and responsible parties are required to document their initial spill actions and the plan shall include the forms that will be used for such documentation.	Figure 5.1
(2) The plan shall describe what equipment will be used to conduct initial spill assessment, including equipment effective during darkness and low visibility conditions, such as visual methods, tracking buoys, trajectory modeling, aerial overflights, thermal or infrared imagery.	Section 2.3
(3) The plan must state how safety assessment including initial air monitoring will be conducted for all types of spills, including spills to groundwater.	Section 2.4, 2.2.9 and Section 5.3
(4) The plan must list procedures that will be used to confirm the occurrence, and estimate the quantity and nature of the spill. An updated report is required if the initially reported estimated quantity or the area extent of the contamination changes significantly.	Section 2.3
ECOLOGY REQUIREMENTS (WAC 173-182-260)	
(1) Each plan shall include procedures which will be taken to immediately notify appropriate parties that a spill has occurred. The plan shall identify the central reporting office or individuals responsible for implementing the notification process.	Section 3
(2) Each plan shall include a list of the names and phone numbers of required notifications to government agencies, response contractors and spill management team members, except that the portion of the list containing internal call down information need not be included in the plan, but shall be available for review by ecology upon request and verified during spills and drills.	Figure 3.4, Figure 3.5
(3) The procedure shall establish a clear order of priority for immediate notification.	Section 3.1, Figure 3.1
(4) In addition, facility plans shall also address how notifications will be made to required government agencies for spills to ground or into permeable secondary containment, and threatened or confirmed spills to ground water.	Section 3.1, Figure 3.1, Figure 3.4
ECOLOGY REQUIREMENTS (WAC 173-182-270)	
(1) Plan holders and PRCs are required to maintain response equipment in a state of constant readiness, and in accordance with manufacturer specifications.	Section 7.1.2, Figure A.2
(2) Plan holders and PRCs that own equipment shall develop schedules, methods, and procedures for equipment maintenance. Maintenance records shall be kept for at least five years and made available if requested by ecology.	Section 7.1.2, Figure A.2
ECOLOGY REQUIREMENTS (WAC 173-182-280)	
(1) Each plan shall contain information on the personnel (including contract personnel) who will be available to manage an oil spill response. To meet the requirement, the plan shall include:	
(a) An organizational diagram depicting the chain of command for the spill management team for a worst case spill.	Figure 4.3 and 4.4

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-280)	
(b) For the purpose of ensuring depth of the spill management team, an organization list of one primary and one alternate person to lead each ICS spill management position down to the section chief and command staff level as depicted in the NWACP standard ICS organizational chart. In lieu of being placed in the plan, this list may be maintained at the plan holder's office and be made available to ecology upon request. If a response contractor is used to fill positions, they must agree in writing to staff the positions. The capacity and depth of spill management teams will be evaluated in drills and spills.	Figure 4.4
(c) A job description for each spill management position; except if the plan holder follows without deviation the job descriptions contained in the NWACP. If the job descriptions are consistent with the NWACP, then the plan holder may reference the NWACP rather than repeat the information.	Section 4
(d) A detailed description of the planning process which will be used to manage a spill. If the process is consistent with the NWACP then the plan holder may reference the NWACP rather than repeat the information.	Section 2
(2) The plan shall address the type and frequency of training that each individual listed in subsection (1)(b) of this section receives. The training program at a minimum shall include as applicable ICS, NWACP policies, use and location of GRPs, the contents of the plan and worker health and safety. The training program shall include participation in periodic announced and unannounced exercises and participation should approximate the actual roles and responsibilities of the individual specified in the plan. New employees shall complete the training program prior to being assigned job responsibilities which require participation in emergency response situations.	Appendix A.2
(3) Covered vessel plan holders shall identify a primary and alternate incident commander's representative that can form unified command at the initial command post, and if located out-of-state, a primary and alternate incident commander that could arrive at the initial command post within six hours. The plan shall include estimated time frames for arrival of the remainder of the spill management team to the spill site, or at the incident command post as appropriate.	N/A
(4) The plan shall list a process for orderly transitions of initial response staff to incoming local, regional or away team personnel, including transitions between shift changes.	Section 4.5, Figure 4.1
(5) Covered vessel umbrella plans must describe the transition from umbrella plan personnel to the vessel owner or operator's team.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-310)	
(1) Ecology shall apply a planning standard when determining the ability of a plan holder to meet the purposes of these regulations. Each planning standard is subject to being verified at scheduled or unannounced drills. In an actual spill event, initial deployment shall be guided by safety considerations. The responsible party must address the entire volume of an actual spill regardless of the planning standards.	

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-310)	
(2) The planning standards described in this chapter do not constitute cleanup standards that must be met by the holder of a contingency plan. Failure to remove a discharge within the time periods set out in this section does not constitute failure to comply with a contingency plan for purposes of this section or for the purpose of imposing administrative, civil, or criminal penalties under any other law.	
ECOLOGY REQUIREMENTS (WAC 173-182-315)	
Each plan holder shall plan to obtain nondedicated work boats and operators that will be available to deploy GRPs, enhance skimming, to provide platforms as vessel of opportunity skimming systems, logistical support or other uses during a spill. At a minimum, the plan shall describe a plan that will support the worst case spill response with work boats and operators that could have arrived on scene beginning at forty-eight hours.	Section 7.1.3, Appendix E.7
ECOLOGY REQUIREMENTS (WAC 173-182-320)	
Each plan shall provide for aerial oil tracking resources capable of being on-scene within six hours of spill awareness. At a minimum, these resources must be capable of supporting oil spill removal operations for three, ten-hour operational periods during the initial seventy-two hours of the discharge.	Section 2.3.1
ECOLOGY REQUIREMENTS (WAC 173-182-325)	
(1) Plan holders with vessels carrying group II or III persistent oil as a primary cargo that transit in any area where preapproval or case-by-case use of dispersants is available as per the NWACP, must plan for the use of dispersants.	N/A
(3) The plan holder must describe the methods of transporting equipment and supplies to a staging area, and appropriate aircraft or vessels to apply the dispersant and monitor its effectiveness.	N/A
(4) These resources must be capable of being on scene within twelve hours of spill awareness.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-330)	
(1) Based on the NWACP, plan holders operating in areas where in situ burning has an expedited approval process must plan for the use of in situ burning.	Section 5.8
(2) The plan holder must identify the locations of two fire booms, air monitoring equipment, igniters and aircraft or vessels to be used to deploy the igniters.	N/A - Due to the pipeline proximity to areas of population.
(3) The fire booms must be five hundred feet in length each and have an additional one thousand feet of conventional boom, tow bridles and work boats capable of towing the boom for burning operations.	N/A - Due to the pipeline proximity to areas of population.
(4) The plan holder must describe the methods of transporting the equipment to a staging area, and appropriate aircraft or vessels to monitor its effectiveness at the scene of an oil discharge.	N/A - Due to the pipeline proximity to areas of population.

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-330)	
(5) These resources must be capable of being on scene within twelve hours of spill awareness.	N/A - Due to the pipeline proximity to areas of population.
ECOLOGY REQUIREMENTS (WAC 173-182-335)	
Plan holders shall identify both on-water devices and shoreside interim storage locations. For marine waters, shoreside storage can be identified to meet fifty percent of storage requirements in the tables below, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage. For freshwater environments, shoreside storage can be identified to meet sixty-five percent of the storage requirements in the tables below, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage.	Appendix E.7
ECOLOGY REQUIREMENTS (WAC 173-182-345)	
Plan holders and PRCs that own equipment shall provide information for ecology to determine the effectiveness of the recovery systems and how the equipment meets the planning standards. To avoid duplication, plan holders relying upon a PRC to meet the necessary planning standards may reference the information submitted in the PRC's application, as approved by the department. Ecology will use the criteria in ASTM International F 1780-97 (Reapproved 2002). Determination of efficiency of recovery systems in varied operating environments and product types:	
(1) For all skimmers, describe how the device is intended to be transported and deployed. List the boom and work boats associated with each water based skimming system. Identify the pumps and pumping capacity that will be used to transfer product to storage devices.	Section 7.1.3 and Appendix E.7
(2) For all oil recovery systems that rely on a vessel of opportunity or nondedicated transport asset, include a statement on how the asset would be located and secured. Include in the plan the mobilization time needed to ensure the assets are available, as well as the time needed to set up the oil recovery system, and the personnel that will be used in the operations. This may require longer mobilization time than those found in this chapter.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-345)	
(1) Plan holders and PRCs that own recovery equipment shall request an EDRC using the following procedures and the criteria in Title 33 CFR 155, Appendix B, Section 6, "Determining Effective Daily Recovery Capacity for Oil Recovery Devices."	
(2) When calculating the EDRC, the formula R = T x 24 hours x E will be used. R = Effective daily recovery capacity T = Throughput rate in barrels per hour (nameplate capacity) E = 20 percent (efficiency factor).	Appendix B
(3) Equipment owners may request an alternative EDRC by providing all of the following information:	

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-345)	
(a) A description of the recovery system which includes skimmer, boom, pump, work boats, and storage associated with the device;	Appendix B
(b) Description of deployment methods that will be used to enhance the recovery system to maximize oil encounter rate during spills;	Appendix B
(c) Documented performance during verified spill incidents; and	
(d) Documentation of laboratory testing using ASTM standard methods (ASTM F 631-80) or equivalent test approved by the U.S. Coast Guard.	Appendix B
(4) The following formula will be used to calculate the effective daily recovery capacity for this alternative approach: R = D x U R = Effective daily recovery capacity D = Average oil recovery throughput rate in barrels per hour U = 10 (hours of operation). 10 hours is used for potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. EDRC is limited to the storage capacity of the proposed recovery system. For each skimming system identify the oil storage associated with each recovery system. State the storage capacity integral to the oil recovery system, if applicable. Describe how recovered oil is to be transported to/from interim storage.	Appendix B
ECOLOGY REQUIREMENTS (WAC 173-182-350)	
The plan holder shall describe how the planning standards found in this chapter are met.	
(1) Each plan shall provide a spreadsheet on the resources intended to meet the planning standards as described in this chapter. This spreadsheet shall account for boom, recovery systems, storage, and personnel by type, quantity, home base and provider.	Appendix B
(2) Ecology will analyze the planning standard spreadsheet provided to determine whether the plan holder has access to equipment and personnel necessary to meet the planning standards.	
(3) For purposes of determining plan adequacy, plan holders will include time for notification and mobilization of equipment and personnel. The time needed for a resource to move to the spill site is the sum of the notification, mobilization, and travel times. For dedicated resources owned by the plan holder, the mobilization planning factor to be used by the plan holder, PRC and ecology is thirty minutes. For all other dedicated response equipment the mobilization planning factor is one hour. Nondedicated resources shall have a mobilization planning factor of three hours.	Figure 3.4, Figure 3.5, Figure 7.1, Figure 7.2, Appendix B.1.1

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-350)	
(4) Equipment travel speeds shall be computed using a speed of thirtyfive miles per hour for land and five knots for water. Ecology will use standard nautical charts and street maps and available on-line mapping programs to determine the length of time it will take equipment to cover a given distance.	Figure 7.1, Figure 7.2, Appendix B.1.1
(5) Plan holders may request approval for alternative notification, mobilization, and travel time by providing documentation to justify the request, such as actual performance during spills or unannounced drills.	
(a) The request shall include date and time of performance or test, weather/sea state conditions and transportation information.	Figure A.3
(b) If ecology accepts these alternative response times then these response times will be tested in unannounced drills to verify alternative calculations.	
ECOLOGY REQUIREMENTS (WAC 173-182-355)	
Transfer sites for covered vessels at locations where transfers occur, and for facilities with a vessel terminal.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-360)	
General planning standards for covered vessel transit locations for all of Puget Sound.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-365)	
(1) To determine the amount of boom necessary for the two hour standard the plan holder must identify by WRIA, surface waters of the state with the potential to be impacted by a spill from the pipeline.	Appendix E.7
(a) To determine the two-hour booming requirements, select the widest river within the WRIA.	N/A
(b) Determine the average river speed at this location.	N/A
(i) For rivers with a current of two knots boom in the amount of three times the widest point in the river that the pipeline could affect.	N/A
(ii) For rivers with a current of three knots the requirement would be for five times the widest point in the river that the pipeline could affect.	N/A
(iii) For rivers with a current of five knots the requirement would be for seven times the widest point in the river that the pipeline could affect.	N/A
(2) Or alternatively, the two hour standard will be two thousand feet of boom.	Section 7.1.2
(3) Boom required for the two hour standard shall be dedicated to spill response and should be staged in various locations along the pipeline.	Section 7.1.2
ECOLOGY REQUIREMENTS (WAC 173-182-370)	
Those covered vessel and facility plan holders that transit or operate within San Juan County must meet this standard. The resources to meet the two and three hour standards must be resident.	N/A

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-375)	
Those covered vessel and facility plan holders that transit or operate north of State Highway 20, east of a line drawn from Shannon Point on Fidalgo Island to Kelly's Point on Guemes Island, south of a line drawn from Clark Point on Guemes Island and William Point on Sammish Island must meet the following standards. Some of the GRPs may be deployed by land.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-380)	
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 47°19'29"N Long. 122°27'23"W (WGS 1984) must meet the following standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-385)	
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 47°06'43"N Long. 122°41'53"W (WGS 1984) must meet the following standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-390)	
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 48°10'56"N Long. 123°06'38"W (WGS 1984) must meet the following standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-395)	
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 48°23'06"N Long. 124°35'59"W (WGS 1984) must meet the following standards. This area is very rugged, in order to accomplish deployment of resources logistical considerations will need to be planned for. Access to GRP locations may need to be done by helicopter or by land access, plans must identify all of the equipment that could be used to deploy GRPs. The boom and recovery resources to meet the two, three and six hour standards must be resident.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-400)	
Those covered vessel and facility plan holders that transit or operate within the jurisdictional waters of Washington state east of the Three Nautical Mile Line and north of latitude 47°06'00"N, and south of latitude 48°09'00"N (WGS 1984) must meet the following standards. This area is very rugged, in order to accomplish deployment of resources logistical considerations will need to be planned for. Access to GRP locations may need to be done by helicopter or by land access, plans must identify all of the equipment that could be used to deploy GRPs.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-405)	
Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at Lat. 46°54'52.25"N Long. 124°10'26.45"W (WGS 1984) outside the entrance to Grays Harbor must meet these standards.	N/A

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-410)	
Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at Lat. 46°44'00"N Long. 124°11'00"W (WGS 1984) outside the entrance to Willapa Bay must meet these standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-415)	
Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 36 and statute mile 42 must meet the following standards. The resources to meet the two and three must be resident.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-420)	
Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 99 and statute mile 107 must meet the following standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-430)	
Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 316 and statute mile 322 must meet the following standards.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-450)	
These standards apply to covered vessels that enter Washington waters at the Columbia River, Grays Harbor or the Strait of Juan de Fuca, and offshore facilities. Plan holders shall be capable of sustaining a worst case spill response and shall develop an addendum specific to Washington's coast, including:	
(1) The capability, if applicable, for in situ burning, dispersant, and mechanical recovery;	N/A
(2) Surveillance equipment (including fixed wing, helicopters and low visibility equipment) to provide for aerial assessment of spill within six hours of spill awareness;	N/A
(3) Time frames and mechanisms to cascade in equipment and other resources for up to seventy-two hours;	N/A
(4) Ten thousand feet of boom appropriate for shoreline protection, containment and/or ten thousand feet of open water boom for enhanced skimming, containment or other use to arrive within twelve hours; and	N/A
5) Twenty thousand feet of boom appropriate for containment, protection or recovery to arrive within twenty-four hours.	N/A
ECOLOGY REQUIREMENTS (WAC 173-182-510)	
(1) Plan holders shall have methods to track and contain spilled oil and enhance the recovery and removal operations that are described in the plan.	Section 2
(2) Each plan shall include a description of how environmental protection will be achieved, including:	
(a) Protection of sensitive shoreline and island habitat by diverting or blocking oil movement;	Appendix F

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-510)	
(b) The plan shall include a description of the sensitive areas and develop strategies to protect the resources, including information on natural resources, coastal and aquatic habitat types and sensitivity by season, breeding sites, presence of state or federally listed endangered or threatened species, and presence of commercial and recreational species, physical geographic features, including relative isolation of coastal regions, beach types, and other geological characteristics;	Section 6
(c) Identification of public resources, including public beaches, water intakes, drinking water supplies, and marinas;	Section 6
(d) Identification of shellfish resources and methods to protect those resources;	Section 6
(e) Identification of significant economic resources to be protected in the geographic area covered by the plan; and	Section 6
(f) Each facility with the potential to impact a "sole source" aquifer or public drinking water source must identify the types of substrate and geographical extent of sensitive sites.	N/A
(3) The GRPs have been developed to meet these requirements and plans may refer to the NWACP to meet these requirements. If approved GRPs do not exist in the NWACP, plan holders will work with ecology to determine alternative sensitive areas to protect.	
(4) Each plan shall identify potential initial command post locations.	Section 7.1.5 and Figure 7.1.7
ECOLOGY REQUIREMENTS (WAC 173-182-520)	
Each plan holder shall identify and ensure the availability of response resources necessary to perform shoreline cleanup operations. This standard will be evaluated using the criteria found in 33 CFR Part 155 Appendix B and 33 CFR 154 Appendix C.	Appendix B
ECOLOGY REQUIREMENTS (WAC 173-182-530)	
(1) Each facility plan shall include a description of the methods to be used to immediately assess ground water spills.	Section 2.2.9
(2) Facility plan holders shall include contact information in the plan for resources typically used to investigate, contain and remediate/recover spills to ground water.	Section 2.2.9 And Section 3
ECOLOGY REQUIREMENTS (WAC 173-182-540)	
The plan shall identify applicable federal, state and NWACP requirements for wildlife rescue and rehabilitation, and describe the equipment, personnel, resource and strategies for compliance with the requirements. These resources shall have the capability to arrive on scene within twenty-four hours of spill awareness.	Section 6.5, Section 6.6, Section 6.7

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-700)	
(1) Plan holders and PRCs shall participate in a drill and equipment verification program for the purpose of ensuring that all contingency plan components function to provide, to the maximum extent practicable, prompt and proper removal of oil and minimization of damage from a variety of spill sizes. In Washington, a modified triennial cycle for drills, as found in the National Preparedness for Response Drill Program (PREP), is relied on to test each component of the plan.	Appendix A.1
(2) Ecology shall be provided an opportunity to help design and evaluate all tabletop and deployment drills. To ensure this, plan holders shall schedule drills on the NWACP area exercise calendar. Scheduling requirements are noted in the table below.	Appendix A.1
(3) Ecology shall mail a written drill evaluation report for drills to the plan holder. Credit will be granted for drill objectives that are successfully met.	
(4) Objectives that are not successfully met shall be tested again and must be successfully demonstrated within the triennial cycle, except that significant failures will be retested within thirty days.	
(5) Plan deficiencies identified in the written evaluation may require plan holders to make specific amendments to the plan.	
(6) A plan holder may request an informal review of the ecology evaluation within thirty days of receipt of the report.	
ECOLOGY REQUIREMENTS (WAC 173-182-710)	
The following drills shall be conducted within each triennial cycle.	
(1) Tabletop drills:	
(a) Tabletop drills are intended to demonstrate a plan holder's capability to manage a spill using the ICS. Role playing shall be required in this drill.	Appendix A.1
(b) Once during each three year cycle, the plan holder shall ensure that key members of the regional/national "away" team as identified in the plan shall be mobilized in state for a drill, except that: At ecology's discretion, away team members may be evaluated in out-of-state tabletop drills if ecology has sufficient notice, an opportunity to participate in the drill planning process, and that the out-of-state drills are of similar scope and scale to what would have occurred in state. In this case, key away team members shall be mobilized in this state at least once every five years.	Figure A.2
(2) Equipment deployment drills:	
(a) During the triennial cycle, deployment drills shall include a combination of owned and contracted assets.	Figure A.2
(b) Plan holders should ensure that each type of equipment listed in the plan and personnel responsible for operating the equipment are tested during each triennial cycle. Plan holders must design drills that will demonstrate the ability to meet the planning standards, including recovery systems and system compatibility. Drills shall be conducted in all operating environments that the plan holder could impact from spills.	Figure A.2

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-710)	
(c) At least twice during a triennial cycle, plan holders shall deploy a GRP strategy identified within the plan. If no GRPs exist for the operating area, plan holders will consult with ecology to determine alternative sensitive areas to protect.	Figure A.2
(d) Plan holders may request credit for the prebooming of an oil transfer.	Figure A.2
(3) Plan holders may receive credit for GRP deployment drills conducted by PRCs if:	
(a) The PRC is listed in the plan; and	Figure A.2
(b) The plan holder operates in the area, schedules and participates in the drill.	Figure A.2
(4) Ecology initiated scheduled inspections and unannounced deployment and tabletop drills.	
(a) In addition to the drills listed above, ecology will implement a systematic scheduled inspection and unannounced drill program to survey, assess, verify, inspect or deploy response equipment listed in the plan. This program will be conducted in a way so that no less than fifty percent of the resources will be confirmed during the first triennial cycle, and the remaining fifty percent during the subsequent triennial cycle.	Figure A.2
(b) Unannounced drills may be called when specific problems are noted with individual plan holders, or randomly, to strategically ensure that all operating environments, personnel and equipment readiness have been adequately tested.	
(c) Unannounced notification drills are designed to test the ability to follow the notification and call-out process in the plan.	
(d) Immediately prior to the start of an unannounced deployment or tabletop drill, plan holders will be notified in writing of the drill objectives, expectations and scenario.	Figure A.2
(e) Plan holders may request to be excused if conducting the drill poses an unreasonable safety or environmental risk, or significant economic hardship. If the plan holder is excused, ecology will conduct an unannounced drill at a future time.	Figure A.2
ECOLOGY REQUIREMENTS (WAC 173-182-720)	
The PREP guidance document lists fifteen core components that shall be demonstrated during the triennial cycle. Ecology adopts the fifteen core components as the criteria used to evaluate drills. The core components are as follows:	
(1) Notifications: Test the notifications procedures identified in the plan.	A.1
(2) Staff mobilization: Demonstrate the ability to assemble the spill response organization identified in the plan.	A.1
(3) Ability to operate within the response management system described in the plan. This includes demonstration of the ICS staffing and process identified in the plan.	A.1
(4) Source control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source.	A.1

FIGURE G.1 - WASHINGTON DEPARTMENT OF ECOLOGY CROSS-REFERENCE INDEX, CONTINUED

ECOLOGY REQUIREMENTS (WAC 173-182-720)	
(5) Assessment: Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.	A.1
(6) Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.	A.1
(7) Recovery: Demonstrate the ability of the spill response organization to recover, mitigate, and remove the discharged product. Includes mitigation and removal activities, e.g., dispersant use, in situ burn use, and bioremediation use.	A.1
(8) Protection: Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the NWACP and the plan.	A.1
(9) Disposal: Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris in compliance with guidance found in the NWACP.	A.1
(10) Communications: Demonstrate the ability to establish an effective communications system throughout the scope of the plan for the spill response organization.	A.1
(11) Transportation: Demonstrate the ability to provide effective multimode. Transportation both for execution of the discharge and support functions.	A.1
(12) Personnel support: Demonstrate the ability to provide the necessary logistical support of all personnel associated with the response.	A.1
(13) Equipment maintenance and support: Demonstrate the ability to maintain and support all equipment associated with the response.	A.1
(14) Procurement: Demonstrate the ability to establish an effective procurement system.	A.1
(15) Documentation: Demonstrate the ability of the plan holder's spill management organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.	A.1

FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE

OPA 90 REQUIREMENTS (49 CFR 194)				LOCATION IN THIS PLAN
1.0	Information Summary			
	(a)	For the core plan:		
		(1)	Name and address of operator;	Figure 1.3
		(2)	For each Response Zone which contains one or more line sections that meet the criteria for determining significant and substantial harm (§194.103), listing and description of Response Zones, including county(s) and state(s)	Figure 1.3
	(b)	For each Response Zone appendix:		
		(1)	Information summary for core plan;	Section 1
		(2)	QI names and telephone numbers, available on 24-hr basis;	Figure 1.3, Figure 3.4
		(3)	Description of Response Zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment.	Section 1
		(4)	List of line sections contained in Response Zone, identified by milepost or survey station or other operator designation.	Figure 1.3
		(5)	Basis for operator's determination of significant and substantial harm; and	Figure 1.3
		(6)	The type of oil and volume of the worst case discharge.	Appendix E
	(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.		Section 1.5
2.0	Notification Procedures			
	(a)	Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable state of local requirements;		Section 3
	(b)	Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority;		Figure 3.4
	(c)	Name of persons (individuals or organizations) to be notified of discharge, indicating whether notification is to be performed by operating personnel or other personnel;		Figure 3.4, Appendix D

FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)			LOCATION IN THIS PLAN
	(d)	Procedures for notifying Qualified Individuals;	Figure 3.3
	(e)	Primary and secondary communication methods by which notifications can be made;	Section 7.1.4
	(f)	Information to be provided in the initial and each follow-up notification, including the following: (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; and (8) Actions taken or planned by persons on scene.	Figure 3.3
3.0	Spill Detection and On-Scene Spill Mitigation Procedures		Section 2.1
	(a)	Methods of initial discharge detection;	Appendix E.3, Section 2.1
	(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;	Section 2
	(c)	List of equipment that may be needed in response activities based on land and navigable waters including: (1) Transfer hoses and pumps; (2) Portable pumps and ancillary equipment; and (3) Facilities available to transport and receive oil from a leaking pipeline;	Appendix E
	(d)	Identification of the availability, location, and contact phone numbers to obtain equipment for response activities on a 24-hour basis;	Figure 3.4
	(e)	Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in response activities on a 24-hour basis;	Figure 3.4
4.0	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, Appendix B

FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)			LOCATION IN THIS PLAN
	(b)	Qualified individual's responsibilities and authority, including notification of the response resources identified in the response plan;	Section 4.6
	(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 4.5
	(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; and	Figure 3.4, Appendix B
	(e)	For each organization identified under paragraph (d), a listing of: (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 7 days of the response.	Appendix B
5.0	List of Contacts		
(Names and addresses of the following individuals or organizations, with telephone numbers at which they can be contacted on a 24-hr basis)			
	(a)	List of persons the plan requires the operator to contact;	Figure 3.4
	(b)	Qualified individuals for the operator's areas of operation;	Figure 1.3, Figure 3.4
	(c)	Applicable insurance representatives or surveyors for the operator's areas of operation; and	Figure 3.4
	(d)	Persons or organizations to notify for activation of response resources;	Figure 3.4
6.0	Training Procedures (Description of training procedures and programs of the operator)		Appendix A
7.0	Drill Procedures (Description of drill procedures and programs the operator uses to assess whether its response plan will function as planned. It would include:)		
	(a)	Announced and unannounced drills;	Appendix A
	(b)	Types of drills and their frequencies. For example: (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 spill management team tabletop drills conducted yearly;	Appendix A

FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION IN THIS PLAN
(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.	Appendix A
8.0 Response Plan Review and Update Procedures	
(a) Procedures to meet §194.121; and	Section 1.2
(b) Procedures to review plan after a worst case discharge and to evaluate and record the plan's effectiveness.	Section 1.2
9.0 Response Zone Appendices	
Each Response Zone appendix would provide the following information:	
(a) Name and telephone number of the qualified individual;	Figure 3.4
(b) Notification procedures;	Section 3, Appendix D
(c) Spill detection and mitigation procedures;	Section 2.1
(d) Name, address, and telephone number of oil spill response organization;	Figure 3.4
(e) Response activities and response resources including: (1) Equipment and supplies necessary to meet §194.115, and (2) Trained personnel necessary to sustain operation of the equipment and to staff the oil spill response organization and spill management team for the first 7 days of the response;	Appendix A
(f) Names and telephone numbers of Federal, State, and local agencies which the operator expects to assume pollution response responsibilities;	Figure 3.4
(g) Worst Case Discharge Volume;	Appendix E.5
(h) Method used to determine the worst case discharge volume, with calculations;	Appendix E.5
(i) A map that clearly shows: (1) Location of worst case discharge, and (2) Distance between each line section in the Response Zone and, (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 1.4

FIGURE G.2 - DOT/PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)			LOCATION IN THIS PLAN
(j)	Piping diagram and plan-profile drawing of each line section, which may be kept separate from the response plan if the location is identified; and		Figure 1.4
(k)	For every oil transported by each pipeline in the Response Zone, emergency response data that:		Appendix E.6
	(1)	Include name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods; and	
	(2)	Meet 29 CFR 1910.1200 or 49 CFR 172.602	

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX

DEQ REQUIREMENTS (OAR 340-047-150)	
Plan Content Requirements	**LOCATION IN THIS PLAN**
(1) Each plan shall contain a submittal agreement which:	
(a) Includes the name, address, and phone number of the submitting party;	Section 1
(b) Verifies acceptance of the plan…either signature of the owner or operator or signature by a person with authority to bind the corporation which owns such facility;	Section 1
(c) Commits execution of the plan;	Section 1
(d) Includes name, location, and address of the facility, type of facility, starting date of operations, types of oil(s) handled, and oil volume capacity;	Figure 1.3
(2) Each plan shall include a log sheet to record amendments to the plan.	Figure 1.1
(3) Each plan shall include a detailed table of contents.	Preface
(4) Each plan shall describe the purpose and scope of that plan, including:	Section 1
(a) Region of operation;	Section 1
(b) Operations covered by the plan;	Section 1
(c) The size and type of maximum probable spill and worst case spill;	Appendix E
(5) Each plan shall describe the procedures and time periods corresponding to updates of the plan and distribution of the plan and updates to affected and interested parties.	Section 1.2
(6) Each plan shall present a strategy to ensure use of the plan for spill response and cleanup operations pursuant to requirements in OAR 340-047-0210;	Section 4
(7) Each plan shall describe the organization of the spill response system.	Section 4
(8) (a) For each primary response contractor…the plan shall state that contractors' name, address, phone number, or other means of contact at any time of the day, and response capability (e.g. land spills only). For each primary response contractor, the plan shall include a letter of intent signed by the primary response contractor which indicates the contractor's willingness to respond.	Appendix B, Figure 3.4
(b) If a plan holder is a member of an oil spill response cooperative…the plan shall state the cooperative's name, address, phone number, and response capability. The plan shall also include proof of cooperative membership.	Appendix B, Figure 3.4
(c) Plans which rely on primary response contractors shall rely only on primary response contractors who have conformed to the Department's Response Contractor Guidelines.	Appendix B
(9) Each plan shall briefly describe its relation to all applicable local, state, regional, and federal government spill response plans.	Section 1.4
(10) Each plan shall list procedures which will be used to detect and document the presence and size of a spill.	Section 2
(11) Each plan shall describe procedures which will be taken to immediately notify appropriate parties that a spill has occurred.	Section 3
(a) Plan holder shall maintain a notification call out list,	Figure 3.4 and 3.5

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX, CONTINUED

DEQ REQUIREMENTS (OAR 340-047-150)	
(A) Provides a contact at any time of the day for all spill response personnel identified under section (7) of this rule, including the contact's name, position title, phone number or other means of contact for any time of the day, and an alternate contact in the event the individual is unavailable;	Figure 3.4
(B) Lists the name and phone number of all government agencies which must be notified in the event of an oil spill;	Figure 3.4
(C) Establishes a clear order of priority for immediate notification;	Figure 3.3
(b) The plan shall identify a central reporting office or individual who is responsible for implementing the call out process;	Section 3
(c) The plan shall utilize a system of categorizing incident type and severity.	Section 2.5
(12) Each plan shall describe the personnel (including contract personnel) available to respond to an oil spill, including:	
(a) A job description for each type of spill response position,	Section 4
(b) The number of personnel available to perform each type of spill response position;	Section 4
(c) Arrangements for pre-positioning personnel at strategic locations which will meet criteria pursuant to OAR 340-047-0190(3)(d).	Section 2 and 4
(d) The type and frequency of spill response operations and safety training that each individual in a spill response position receives to attain the level of qualification demanded by their job description; and	Section 4, Appendix A
(e) The procedures, if any, to train and use volunteers willing to assist in spill response operations. Volunteer procedures for wildlife rescue shall comply with the Oregon Oil Wildlife Rehabilitation Plan.	Appendix A
(13) (a) Each plan shall list the type, quantity, age, location, maintenance schedule, and availability of equipment used during spill response, including equipment used for oil containment, recovery, storage, and removal, shoreline and adjacent lands cleanup, wildlife rescue and rehabilitation, and communication.	Section 7.1
(b) For equipment listed under subsection (a) of this section that is not owned by or available exclusively to the plan holder, the plan shall also estimate the extent to which other contingency plans rely on that same equipment.	Section 7.1, Appendix B
(c) For oil containment and recovery equipment, the plan also shall include equipment make and model, the manufacturer's nameplate capacity of the response equipment (in gallons per minute), and applicable design limits (e.g., maximum wave height capacity; inland waters vs. open ocean).	Section 7.1, Appendix B
(d) Based on information described in subsection (c) of this section, the plan shall state the maximum amount of oil which could be recovered per twenty-four hour period.	Figures E.2, E.3, E.4, E.5
(e) For purpose of determining plan adequacy under OAR 340-047-0190 and to assess realistic capabilities based on potential limitations by weather, sea state, and other variables, the data presented in subsections (c) and (d) of this subsection will be multiplied by an average efficiency factor of twenty percent. The Department will apply a higher efficiency for equipment listed in a plan if that plan holder provides adequate evidence that the higher efficiency factor is warranted for particular equipment. The Department may assign a lower efficiency factor to particular equipment listed in a plan if it determines that the performance of that equipment warrants such a reduction.	Appendix E

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX, CONTINUED

DEQ REQUIREMENTS (OAR 340-047-150)	
(f) The plan shall provide arrangements for prepositioning of oil spill response equipment at strategic locations which will meet criteria pursuant to OAR 340-047-0190(e)(d) and provide an estimate of the actual execution time.	Appendix E
(14) Each plan shall describe the communication system used for spill notification and response operations, including:	Section 7.1.4
(a) Communication procedures;	Section 7.1.4
(b) The communication function (e.g., ground-to-air) assigned to each channel or frequency used; and	Section 7.1.4
(c) The maximum geographic range for each channel or frequency used.	Section 7.1.4
(15) Each plan shall describe the process to establish sites needed for spill response operations, including location or location criteria for:	
(a) A central command post;	Section 7.1.5
(b) A central communication post if located away from the command post; and	Section 4.4
(c) Equipment and personnel staging areas.	Section 4.4, Volume II GRP
(16) (a) Each plan shall present a flowchart or decision tree describing the procession of each major stage of spill response operations from spill discovery to completion of cleanup. The flowchart or decision tree shall describe the general order and priority in which key spill response activities are performed.	Preface
(b) Each plan shall describe all key spill response operations in checklist form, to be used by spill response managers in the event of an oil spill.	Figures 2.1 and 3.4
(17) (a) Each plan shall list the local, state, and other government authorities responsible for the emergency procedures peripheral to spill containment and cleanup, including:	
(A) Procedures to control fires and explosions, and to rescue people or property threatened by fire or explosion;	Section 2
(B) Procedures to control ground and air traffic which may interfere with spill response operations;	Section 2
(C) Procedures to manage access to the spill response site; and	Section 2
(D) Procedures to protect sensitive areas during emergency operations.	Volume II GRP
(b) Each plan shall describe the plan holder's role in these emergency operations procedures prior to the arrival of proper authorities.	Section 2
(18) Each plan shall describe equipment and procedures to be used by the facility personnel to minimize the magnitude of the spill and minimize structural damage which may increase the quantity of oil spilled. Damage control procedures shall include methods to slow or stop pipeline, storage tank, and other leaks, and methods to achieve immediate emergency shutdown.	Section 2
(19) Each plan shall describe, in detail methods to contain spilled oil and remove it from the environment. Methods shall describe deployment of equipment and personnel, using diagrams or other visual aids when possible. Response methods covered must include:	Section 2, Appendix F, Volume II GRP
(a) Surveillance methods used to detect and track the extent and movement of the spill;	Section 2, Appendix F
(b) Methods to contain and remove oil in offshore waters;	Section 2, Appendix F
(c) Methods to contain and remove oil in near-shore waters, including shoreline protection procedures and oil diversion/pooling procedures; and	Section 2, Appendix F

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX, CONTINUED

DEQ REQUIREMENTS (OAR 340-047-150)	
(d) Methods to contain and remove oil, including surface oil, subsurface oil, and oiled debris and vegetation, from a variety of shoreline, adjacent land, and beach types.	Section 2, Appendix F
(20) Each plan shall briefly describe initial equipment and personnel deployment activities which will accomplish the response standard listed in OAR 340-047-0190(e)(d) and provide an estimate of the actual execution time.	Section 2; Figures E.2 - E.5
(21) If the plan holder proposes dispersants, coagulants, bioremediants, or other chemical agents for response operations, conditions permitting, the plan shall describe:	Sections 5
(a) Type and toxicity of chemicals;	Sections 5
(b) Under what conditions they will be applied in conformance with all applicable local, state, and federal requirements, including Volume II of the Oil and Hazardous Material Spill Contingency Plan and OAR 340-047-0020;	Sections 5
(c) Methods of deployment; and	Sections 5
(d) Location and accessibility of supplies and deployment equipment.	Sections 5
(22) If the plan holder will use in-situ burning for response operations, conditions permitting, the plan shall describe:	Sections 5
(a) Type of burning operations;	Sections 5
(b) Under what conditions burning will be applied in conformance with all applicable local, state, and federal requirements, including Volume II of the Oil and Hazardous Material Spill Contingency Plan and OAR 340-047-0035;	Sections 5
(c) Methods of application; and	Sections 5
(d) Location and accessibility of supplies and deployment equipment.	Sections 5
(23) Each plan shall describe how environmental protection will be achieved, including:	
(a) Protection of sensitive shoreline and island habitat by diverting or blocking oil movement;	Section 6, Volume II GRP
(b) Priorities for sensitive area protection in the region of operation covered by the plan as designated by the Department in environmentally sensitive area maps referenced in Volume I of the Oil and Hazardous Materials Spill Contingency Plan;	Section 6, Volume II GRP
(c) Rescue and rehabilitation of birds, marine mammals, and other wildlife contaminated or otherwise affected by the oil spill in compliance with the Oregon Oil Wildlife Rehabilitation Plan; and	Section 6
(d) Measures take to reduce damages to the environment caused by shoreline and adjacent land cleanup operations.	Section 6, Volume II GRP
(24) (a) Each plan shall describe site criteria and methods used for interim storage of oil recovered and oily wastes generated during response and cleanup operations, including sites available within the facility. Interim storage methods and sites shall be designed to prevent contamination by recovered oil and oily wastes;	Section 5.5
(b) If use of interim storage sites will require approval by local, state, or federal officials, the plan shall include information which could expedite the approval process, including a list of appropriate contacts and a brief description of procedures to follow for each applicable approval process;	Section 5.5

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX, CONTINUED

DEQ REQUIREMENTS (OAR 340-047-150)	
(c) Each plan shall describe methods and sites used for permanent disposal of oil recovered and oily wastes generated during response and cleanup operations;	Section 5.5
(d) Interim storage and permanent disposal methods and sites shall be sufficient to keep up with oil recovery operations and handle the entire volume of oil recovered and oily wastes generated;	Section 5.5
(e) Interim storage and permanent disposal methods and sites shall comply with all applicable local, state, and federal requirements.	Section 5.5
(25) Each plan shall describe procedures to protect the health and safety of oil spill response workers, volunteers, and other individuals on-site. Provisions for training, decontamination facilities, safety gear, and a safety officer position shall be addressed.	Section 5.5
(26) Each plan shall explain post-spill review procedures, including methods to review both the effectiveness of the plan and the need for plan amendments.	Section 8
(27) (a) Describe the schedule and type of drills and other exercises.	Appendix A
(b) Tests of internal call out procedures shall be performed at least once every ninety calendar days and documented by the plan holder.	Appendix A
(28) Each facility plan shall list the spill risk variable within the region of operation covered by the plan, including:	Appendix E
(a) Types, physical properties, and amounts of oil handled;	Appendix E
(b) A written description and map indicating site topography, storm water and other drainage system, mooring areas, pipelines, tanks, and other processing, storage, and transfer sites and operations;	
(c) A written description of sites or operations with a history of or high potential for oil spills; and	Appendix E
(d) Methods to reduce spills during transfer operations, including overfill protection.	Section 2
(29) List the environmental variables within the region of operation covered by the plan, including:	
(a) Natural resources.	Section 6, Volume II GRP
(b) Public resources.	Section 6
(c) Seasonal hydrographic and climatic conditions; and	Section 6, Volume II GRP
(d) Physical geographic features.	Section 6, Volume II GRP
(30) List the logistical resources within the region of operation covered by the plan, including:	Figure 3.4
(a) Facilities for fire services, medical services, and accommodations; and	Figure 3.4
(b) Shoreline access areas, including boat launches	Section 6, Volume II GRP
(31) (a) Describe detailed, plausible, step-by-step response scenarios for:	Appendix E
(A) A small oil spill less than five hundred gallons; and	Appendix E
(B) A maximum probable spill.	Appendix E
(C) A worst case spill	Appendix E
(b) Each scenario description shall include:	Appendix E

FIGURE G.3 - STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CROSS-REFERENCE INDEX, CONTINUED

DEQ REQUIREMENTS (OAR 340-047-150)	
(A) The circumstances surrounding the spill, including size, type, location, climatic and hydrographic conditions, time, and cause;	Appendix E
(B) An estimate of oil movement during the first 72 hours, including likely shoreline contact points; and	Appendix E
(C) Estimates of response time and present recovery for each major phase of operations.	Appendix E
(c) Plan applies to multiple facilities, each scenario description shall discuss implementation of the plan in the event of simultaneous separate spills.	Appendix E
(32) Each plan shall provide evidence that the vessel or facility is in compliance with federal financial responsibility requirements pursuant to ORS 468B. 390.	
(33) Each plan shall include a glossary of technical terms and abbreviations used in the plan	Appendix H

APPENDIX H
ACRONYMS AND DEFINITIONS

H.1 Acronyms 2
H.2 Definitions 4

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H.1 ACRONYMS

ACP ..... Area Contingency Plan
ANPRM ..... Advanced Notice of Proposed Rulemaking
BART ..... BP Americas Response Team
BLM ..... Bureau of Land Management
CERCLA ..... Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CFR ..... Code of Federal Regulations
COTP ..... Captain of the Port (USCG)
CWA ..... Clean Water Act (Federal)
DEQ ..... Department of Environmental Quality (Oregon)
DOE ..... Department of Ecology (Washington)
EOC ..... Emergency Operations Center
EPA ..... U. S. Environmental Protection Agency
EPCRA ..... Emergency Planning and Community Right-to-Know
FAA ..... Federal Aviation Administration
FEMA ..... Federal Emergency Management Administration
FOSC ..... Federal On-Scene Coordinator
FRT ..... Facility Response Team
FWPCA ..... Federal Water Pollution Control Act
GIS ..... Geographic Information System
HMIS ..... Hazardous Material Information System
IC ..... Incident Commander
ICS ..... Incident Command System
LEPC ..... Local Emergency Planning Commission
LOSC ..... Local on-Scene Coordinator
MMS ..... Minerals Management Service (USDOI)
MSDS ..... Material Safety Data Sheets
MSO ..... Marine Safety Office (USCG)
MSRC ..... Marine Spill Response Corporation
MTR ..... Marine Transportation Related
NCP ..... National Contingency Plan
NIIMS ..... National Interagency Incident Management System
NM ..... Nautical Miles
NOAA ..... National Oceanic and Atmospheric Administration
NRC ..... National Response Center (USCG)
NRDA ..... National Resource Damage Assessment
NRT ..... National Response Team
OPA 90 ..... Oil Pollution Act of 1990
OSC ..... On-Scene Coordinator/Commander
OSHA ..... Occupational Safety and Health Administration
OSRO ..... Oil Spill Response Organization
PPE ..... Personal Protective Equipment
QI ..... Qualified Individual
RCRA ..... Resource Conservation and Recovery Act of 1976
RRT ..... Regional Response Team (Federal)
RQ ..... Reportable Quantity
SARA ..... Superfund Amendments and Reauthorization Act
SERC ..... State Emergency Response Commission
SPCC ..... Spill Prevention Control and Countermeasures
SSC ..... Scientific Support Coordinator (NOAA)
USACE ..... U. S. Army Corps. of Engineers
USCG ..... U. S. Coast Guard
USDOD ..... U. S. Department of Defense

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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. Department of Wildlife Service (USDOI)
USGS ..... U. S. Geological Survey (USDOI)
WUTC ..... Washington Utilities and Transportation Commission

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H.2 DEFINITIONS

Access/Staging Areas
Designated areas offering access to spill sites for the gathering and deployment of spill response equipment and personnel.

Absorbent Material
Any of the several materials designed to absorb oil, both hydrocarbon and non-hydrocarbon.

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.

Average Most Probable Discharge
A discharge of the lesser of 50 barrels (2100 gallons) or 1 percent of the volume of the worst-case discharge.

Barrel
A quantity of liquid equal to 42 U. S. gallons.

Boom
Any number of specially designed devices that float on water and are used to contain or redirect the flow of oil on the water=s surface.

Captain of the Port Zone (COTP)
A zone specified in 33 CFR Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).

Clean-Up Contractor
Persons contracted to undertake a response action to contain and clean up a spill.

Coastal Waters
All tidally influenced waters extending from the head of tide seaward to the three marine league limit of state jurisdiction; and non-tidally influenced waters extending from the head of tide in the arms inland to the point at which navigation by regulated vessels is naturally or artificially obstructed.

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 response operations from this location.

Communication Equipment
Equipment used to maintain communication between employees, contractors, Federal/State/Local agencies during response operations. (Radio/telephone equipment and links).

Containment Boom
Boom designed to entrap and contain the product for recovery.

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.

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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 U.S.C.G. 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 U.S.C.G. 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; and
  - Is incorporated by reference in the response plan; or
  - 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.

Critical Areas
Areas which, if impacted by a spill, may result in threats to public health and/or safety.

Cultural Resources
Current, historic, prehistoric, and archaeological resources which include deposits, structures, sites, ruins, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to historical or prehistoric culture of people as well as the natural history of the state.

Damage Assessment
The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

Decontamination
The removal of hazardous substances from personnel and equipment necessary to prevent adverse health effects.

Discharge
Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants
Chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

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Diversion Boom
Boom designed to deflect or divert the product towards a pick up point, or away from certain areas.

Emulsification
The formation of a water-in-oil mixture. Different oils exhibit different tendencies to emulsify, and emulsification is more likely to occur under high-energy conditions (strong winds and waves). An emulsified mixture of water in oil is commonly called "mousse;" its presence indicates a spill that has been on the water for some time.

Entrainment
The loss of oil from containment when it is pulled under a boom by a strong current. Entrainment typically occurs from booms deployed perpendicular to currents greater than 1 knot (0.5 meter per second).

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.

Estuary
Unique environment at the mouth of coastal rivers where fresh water and sea water meet, providing important habitat for marine life, birds, and other wildlife.

Exclusion Zone
The area where contamination does or may occur.

Exclusive Economic Zone
The zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Facility
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.

Facility that could be reasonably expected to cause significant and substantial harm
Any fixed MTR onshore facility (including piping and bay structures that are used for the transfer of oil between a vessel and a facility) that is capable of transferring oil, in bulk, to or from a vessel of 250 barrels or more, and a deepwater port. This also includes any facility especially identified by the COTP.

Facility that could reasonably be expected to cause substantial harm
Any mobile MTR facility that is capable of transferring oil to or from a vessel with a capacity of 250 barrels or more.

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.

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Harmful Quantity of Oil
The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen or discoloration upon water, shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

Hazardous 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

Incident
Any event that results in the spill or release of oil or hazardous materials.

Incident Commander (IC)
The individual in charge of an incident at any given time. The Incident Commander is responsible for establishing a unified command with all on-scene coordinators.

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Incident Command System (ICS)
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.

Initial Notification
The process of notifying necessary company personnel and Federal/State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

Inland Area
The area shoreward of the boundary lines defined on 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcations (COLREG lines) defined in §80.740 - 80.850 of Title 33 of the CFR. The inland area does not include the Great Lakes.

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.
- U. S. Environmental Protection Agency (EPA): Oil and chemically hazardous materials incidents on inland waters.

Lead State Agency
The agency which coordinates state support to Federal and/or Local governments or assumes the lead in the absence of a Federal spill response.

Lower Explosive Limit
Air measurement to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

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 (MMPD)
A discharge of the lesser of 2,500 barrels or 10 percent of the volume of a worst-case 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.

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Natural Resource
Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the State, Federal government, private parties, or a municipality.

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 340°C (645°F); and
- At least 95% of which by volume, distill at a temperature of 370°C (700°F).

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 Cooperative
Multi-company cooperative organization developed by industry to assist with oil spill response and clean up. Typically, manpower and equipment are identified by a company on a voluntary basis.

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.

Oil Spill Response Contractors
Persons/Companies contracted to undertake a response action to contain and/or clean up a spill.

Oily Waste
Oil contaminated waste resulting from an oil spill or oil spill response operations.

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.

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Operating Environment
Rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

Owner or Operator
Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil
A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

- Group II - specific gravity less than .85.
- Group III - specific gravity between .85 and less than .95.
- Group IV - specific gravity .95 to and including 1.0.
- Group V - specific gravity greater than 1.0.

Primary Response Contractor
An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or clean up of spilled oil.

Qualified Individual
An English-speaking representative 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 (FOSC); and
- Obligating, either directly or through prearranged contracts, funds required to carry out all necessary or directed response activities.

Regional Response Team
The Federal Response Organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Response Plan
A practical plan used by industry for responding to a spill. Its features include (1) identifying the notification sequence, responsibilities, response techniques, etc. in an easy to use format; (2) using decision trees, flowcharts, and checklists to ensure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from that required by regulatory agencies to prevent confusion during a spill incident.

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.

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Sheen
A very thin layer of oil (less than 0.0001 inches or 0.003 millimeters in thickness) floating on the water surface. Sheen is the most commonly observed form of oil during the later stages of a spill. Depending on thickness, sheens range in color from dull brown for the thickest sheens to rainbows, grays, silvers, and near-transparency in the case of the thinnest sheens.

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.

Slick
Oil spilled on the water, which absorbs energy and dampens out surface waves, making the oil appear smoother or slicker than the surrounding water.

Sorbents
Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

Spill Management Team
Personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

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.

Substantial Threat of a Discharge
Any incident or condition involving a facility that may create a risk of discharge of fuel or cargo oil. Such incidents include, but are not limited to, storage tank or piping failures aboveground or underground leaks, fire explosions, flooding, spills contained within the facility or other similar occurrences.

Tidal Current Charts
Comprehensive charts which contain the predicted tidal current for each day of the year for designated areas. These charts specify the direction and speed of the current in the specific areas.

Tide Tables
Tables which contain the predicted times and heights of high and low waters for each day of the year for designated areas.

Unified Command
The method by which Local, State, and Federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed upon objectives.
- Deploy resources to achieve agreed-upon objectives.

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Waste
Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Wildlife Rescue
Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

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