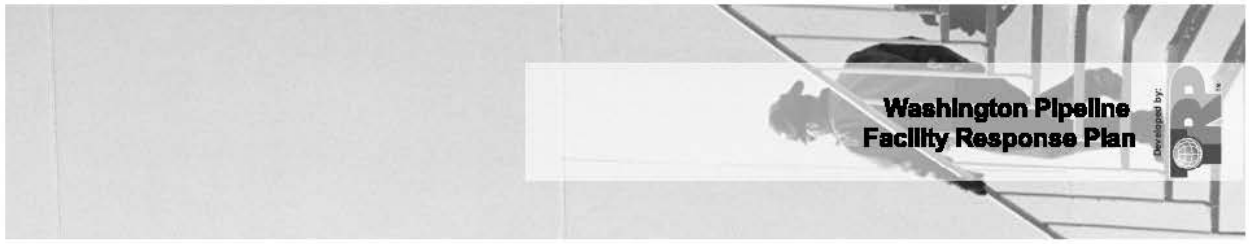
Washington Pipeline
Facility Response Plan

Washington Pipeline
Facility Response Plan

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Facility Response Plan
Developed by:
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TECHNICAL RESPONSE PLANNING
CORPORATION
1610 Woodstead Court, #355 • The Woodlands, Texas 77380 USA • Tel: 281-955-9600 • Fax: 281-955-0369 • info@trpcorp.com • www.emergency-response-planning.com

Washington Pipeline , WA
Facility Response Plan

P.O. Box 1210
Vancouver, WA 98666-1210

Developed by:

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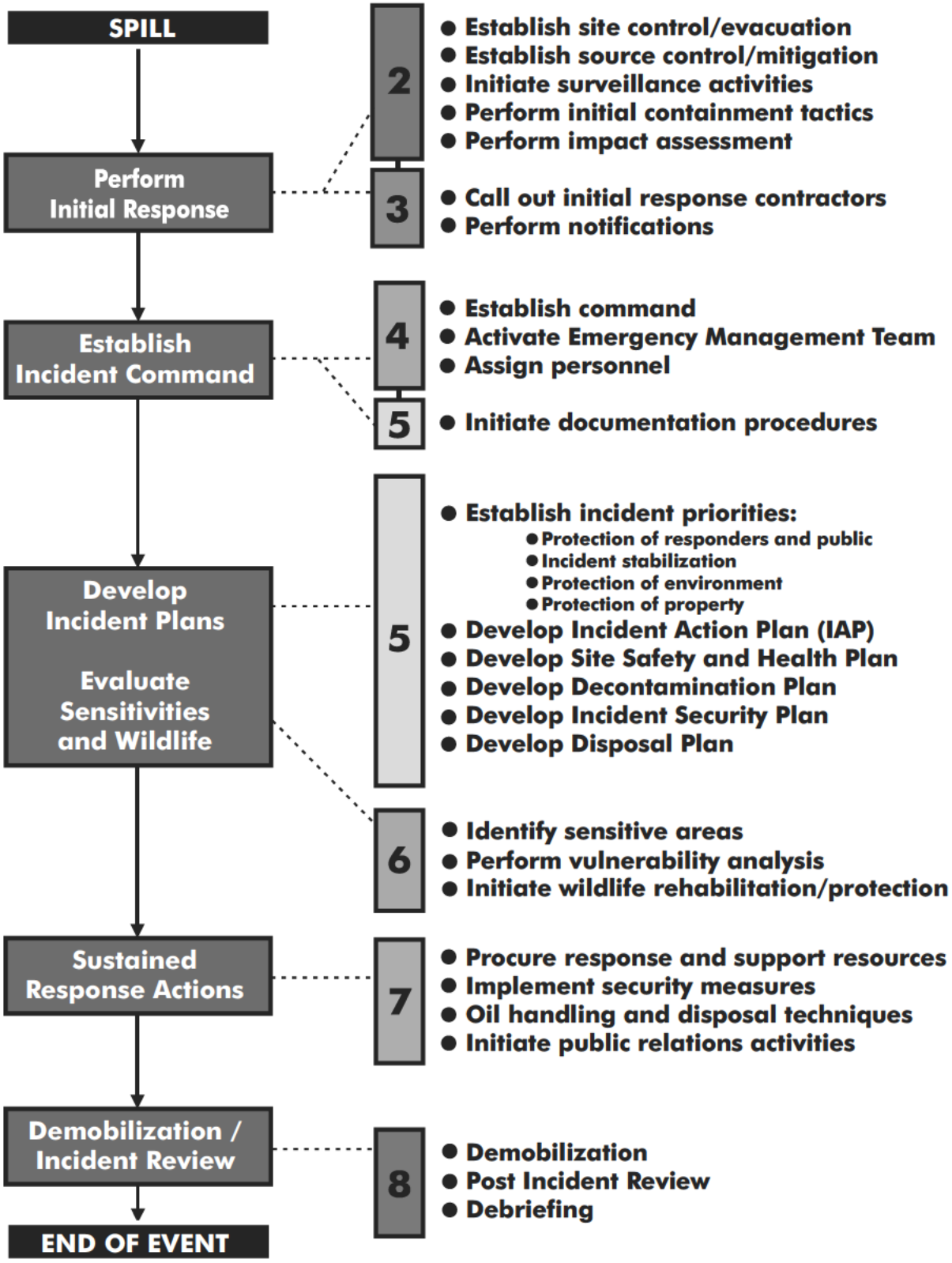
1610 Woodstead Court, #355 · The Woodlands, Texas 77380 USA · Tel: 281-955-9600 · Fax : 281-955-0369 · info@trpcorp.com · www.emergency-response-planning.com

Response Procedures Flow Chart



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EMERGENCY PROCEDURES FIELD GUIDE

Last Revised: 02/27/2014

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- **Oil Spill Response - Emergency Procedures Field Guide**

TIDEWATER
TRANSPORTATION & TERMINALS

OIL SPILL RESPONSE --- EMERGENCY PROCEDURES FIELD GUIDE

1. STOP THE PRODUCT FLOW	-- Act quickly, secure pumps, close valves, etc.
2. WARN PERSONNEL	-- Enforce safety and security measures. Call 911 if necessary.
3. SHUT OFF IGNITION SOURCES	-- Motors, electrical circuits, open flames, welding, etc.
4. CONTAIN/CONTROL SPILL	-- Use berms, boom, water hose, etc. If gasoline in water – divert away.
5. NOTIFY TIDEWATER DISPATCH	**-- (503) 289-4274 or (800) 562-1607 (24 hr)** Use Spill Report Form (see reverse) as guide
6. DISPATCH NOTIFY COMPANY Q.I.	-- Report extent of damage, assistance required, injuries, etc.

7. DISPATCH, COMPLETE SPILL REPORT FORM AND NOTIFY AS APPROPRIATE
NOTE: notifications for vessel incidents/substantial threats of a spill must be completed within 1-hr of the incident

OIL SPILL RESPONSE ORGANIZATION (OSRO)

Clean Rivers Cooperative	(503) 220-2040
NRCES	(800) 337-7455

MSDS

ChemTel Expert Assistance	(800) 704-9215

AGENCIES

National Response Center (NRC)	(800) 424-8802 or (202) 267-2675	Idaho State Communication Center	(800) 632-8000 or (208) 846-7610
USCG – Sector Portland	(503) 240-9311	US EPA Region X	(206) 553-1263
Oregon Emergency Response System	(800) 452-0311	WA Utilities & Trans. Com. (Pipeline)	(888) 321-9144
WA State Dept. of Emergency Mgmt.	(800) 258-5990		

8. SUPPLEMENTAL

a. Tidewater Barge Lines (Qualified Individual) will implement an appropriate response, including salvage and recovery-cleanup operations. This includes utilizing a third party contractor or spill clean-up cooperative, if necessary.

b. Dispatch and/or Qualified Individual will consult Tidewater Barge Lines' Integrated Contingency Plan (ICP) and other resources for (USCG/State) detailed information concerning the company's spill response management team, spill action plan (assessment, response options, containment, recovery, cleanup, decontamination, etc.), additional resources, response capabilities, communications, documentation, environmental sensitivity, disposal, training, and safety.

FIELD SPILL/VESSEL EMERGENCY REPORT FORM

Use the following report as a guide when reporting a spill or vessel to Dispatch.

Date of Incident:	Time of Incident:
Date of Report:	Time of Report:
Reporter's Name, Facility Name, and Phone Number, Tow Vessel and/or Barge Name, Size and Cargo Capacity, Type, Country of Registry, Call Sign, and Official Name.	
Type and cause (if known) of Incident:	
Location of the Incident (include river mile, nearest city, dock, lat/long, etc, or location within facility):	
Party(s) involved in the Incident:	
Type of product and quantity discharged or having potential to discharge – best estimate based on flow rate, time elapsed, tank capacity, etc. & how much is in the water:	
Potential environmental threats – shorelines, wildlife habitats, boat harbor, etc.:	
Safety, containment and response actions taken or planned:	
Extent of any injuries or damage as a result of the incident, potential fire or safety hazards:	
Weather conditions on scene: (Wind Speed, Direction, Air Temperature, Water Conditions, Visibility):	
Slick size and appearance (Barely Visible, Silvery, Slightly Colored, Brightly Colored, Dull or Dark): Direction of slick movement and estimated speed:	
Current condition of the vessel/facility: (for vessels, include information to establish seaworthiness and assess damage stability and stress.) Tow vessel information: (Course, speed and intended track of towing vessel, radio station and frequencies guarded, and date and time of next report.).	

DOCUMENT EACH PARTY THAT HAS BEEN NOTIFIED

AGENCY/COMPANY	NAME OF CONTACT	CONTACT TIME	COMMENTS

Report Taken By:	Date/Time:

Report all incident as soon as possible. Do not delay initial notification pending collection of information.

National Response Center 1-800-424-8802
Washington Emergency Management Division 1-360-407-6300
Oregon Emergency Response System 1-800-452-0311

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RECORD OF CHANGES

Changes to this Plan will be documented on this page. Plan review and modifications will be initiated and coordinated by the District Health, Safety, and Environmental Coordinator.

DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER

RECORD OF AMENDMENTS

SECTION AMENDED	DATE	DEPT. NOTIFIED (Y / N)	CHANGED BY (INITIALS)	DESCRIPTION OF AMENDMENT	PURPOSE OF AMENDMENT
previous version	3/3/2008	Yes		Revisions	EPA review
previous version	3/28/2008	Yes		Revisions	USCG review
previous version	4/30/2008	Yes		Revisions	USCG review
previous version	9/1/2008	Yes		Revisions	New vessel coverage
previous version	11/10/2008	Yes		Revisions	WDOE & USCG review
previous version	11/21/2008	Yes		Revisions	DEQ review
previous version	4/17/2009	Yes		Revisions	USCG & DOE Review
previous version	6/19/2009	Yes		Revisions	Integrated SPCC Plans into Contingency Plan

RECORD OF AMENDMENTS

SECTION AMENDED	DATE	DEPT. NOTIFIED (Y / N)	CHANGED BY (INITIALS)	DESCRIPTION OF AMENDMENT	PURPOSE OF AMENDMENT
previous version	9/2/2009	Yes		Revisions	WDOE - Prevention Plan Integration
previous version	12/1/2009	Yes		Revisions	WDOE Review
previous version	6/1/2010	Yes		Revisions	WDOE Spill Prevention Plan Review
previous version	9/1/2010	Yes		Revisions	Change in facility configuration from fertilizer storage to diesel storage. Addition of fueling dock.
previous version	8/1/2011	Yes		New Pagination in Sections 1 - 8 and Appendices A - J.	
previous version	8/1/2011	Yes		Section 1 - Cell Phone numbers updated.	
previous version	8/1/2011	Yes		Section 2 - Fig. 2.1: Changed wording in #8, Added LEPC to #11, Fig. 2.9: Updated communications equipment.	
previous version	8/1/2011	Yes		Section 3 - Fig. 3.2: Changed order of notifications, Fig. 3.3A: Changed one QI to Bruce Reed, Environmental Manager to Bill Collins, Updated cell phone numbers, Fig. 3.3D: Added LEPC information, Fig. 3.4: Updated QI Letter.	

RECORD OF AMENDMENTS

SECTION AMENDED	DATE	DEPT. NOTIFIED (Y / N)	CHANGED BY (INITIALS)	DESCRIPTION OF AMENDMENT	PURPOSE OF AMENDMENT
previous version	8/1/2011	Yes		Section 4 - Fig. 4.3: Updated ICT Roster.	
previous version	8/1/2011	Yes		Section 5 - 5.3 ICS Forms - updated forms.	
previous version	8/1/2011	Yes		Section 6 - Fig. 6.2: Deleted Sundial Marine.	
previous version	8/1/2011	Yes		Section 7 - Fig. 7.2: Changed Sundial contact name/number.	
previous version	8/1/2011	Yes		Appendix B - B.1.3: Salvage Contractor changed to Resolve, Figure B.1: Deleted Hickey Marine and FDS Marine, Added Resolve Salvage & Fire, Updated Tidewater Emergency Response Rate Schedule, Added Resolve Salvage & Fire Agreement, Deleted Hickey Marine Salvage Agreement.	
previous version	8/1/2011	Yes		Appendix F - Inserted New Dawn marine pre-fire plan (page F-42), Inserted New Endeavor marine pre-fire plan (page F-48), Inserted New Vision marine pre-fire plan (page F-54), Inserted Pioneer marine pre-fire plan (page F-60), Inserted Prospector marine pre-fire plan (page F-66), Inserted Explorer marine pre-fire plan (page F-72), Inserted Tri-Cities Voyager marine pre-fire plan (page F-78), Inserted New Frontier marine pre-fire plan (page F-95), Updated USCA Financial Resp. Certs list (page F-105).	
previous version	8/1/2011	Yes		Appendix J - Updated procedures to most current versions.	
previous version	5/1/2012	Yes		Section 1 - Fig. 1.2: Added QI's and locations for ICP Manual; Cell phone numbers updated. Section 3 - Fig. 3.2: Changed order of notifications; Fig. 3.3: Updated names and numbers; Fig. 3.4: Updated QI Letter. Section 4 - Fig. 4.3: Updated ICT Roster.	

RECORD OF AMENDMENTS

SECTION AMENDED	DATE	DEPT. NOTIFIED (Y / N)	CHANGED BY (INITIALS)	DESCRIPTION OF AMENDMENT	PURPOSE OF AMENDMENT
previous version	11/1/2012	Yes		Section 1 - Fig 1.3: Added pipeline names and descriptions, changed Wilma Terminal from active to caretaker status; New Binding Agreement. Section 2 - Fig. 2.9: Communications equipment updated. Section 3 - Fig 3.3: Updated Notification Summary and Documentation Form. Section 4 - Fig 4.3: Updated Incident Command Team Roster. Section 7 - Fig 7.2: Updated Tidewater Response Trailer Locations contact information.	
previous version	11/1/2012	Yes		Appendix B - Inserted new International Bird Rescue and National Response Corporation agreements. Appendix C - Inserted new Tidewater Industrial Center, Snake River Terminal, and Umatilla Terminal SPCC Plans. Appendix F - Fig. F.16: Updated salvage managers; Updated Certificate of Financial Responsibility information. Appendix J - Table J-2: Updated inspection date requirements; Inserted updated operational procedures.	
1	2/3/2014	Yes	SS	Added worst case discharge and significant and substantial harm statement to Figure 1-2. Added requirement to resubmit plan to PHMSA every 5 years in Section 1.2.	PHMSA Comment
Sections 2, 3, 4, 6, & 7. Appendices A, B, C, D & E		Yes	SS	Revisions made per comments from Ecology.	Washington Department of Ecology comments.

SECTION 1
INTRODUCTION

Last Revised: 09/01/2009

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Figure 1-1 - Distribution List

Figure 1-2 - Washington Pipeline Information Summary

Figure 1-3 - Overview Map

Figure 1-4 - Pipeline System Overview Map

1.1 Purpose / Scope of Plan

1.2 Plan Review and Update Procedure

1.3 Binding Agreement

1.4 Interface with Other Plans

Figure 1-5 - Interface with Other Plans

1.5 Certification of Adequate Resources

1.6 Agency Submittal / Approval Letters

Figure 1-6 - Submittal Agreement

FIGURE 1-1 - DISTRIBUTION LIST

PLAN HOLDER	ADDRESS	NUMBER OF PAPER COPIES	NUMBER OF ELECTRONIC COPIES
U.S. Department of Transportation - PHMSA	**Office Address:** 1200 New Jersey Avenue Room E22 SE East Washington, DC 20590 United States	0	2
Washington Department of Ecology	**Office Address:** Attn: Spill Prevention, Preparedness, and Response Program Preparedness Section, Contingency Plan Review, P.O. Box 47600 Olympia, WA 98504-7600 United States	1	1
Washington Utilities and Transportation Commission, Attn: Dave Lykken	**Office Address:** 1300 South Evergreen Park Dr. SW, P.O. Box 47250 Olympia, WA 98504-7250 United States	0	1
Tidewater Barge Lines, Inc., Corporate Office Document Ctrl	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc. Corporate Office Library	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Dispatch Office	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Environmental Manager's Office	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Director of EHS&S	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Port Engineer's Office	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Maintenance Conference Room	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0

FIGURE 1-1 - DISTRIBUTION LIST

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Tidewater Barge Lines, Inc., Maintenance Barge 30	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Barge Lines, Inc., Maintenance Barge 50	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Tidewater Terminal Company, Snake River Terminal	**Office Address:** 671 Tank Farm Road Pasco, WA 99301 United States	2	0
Tidewater Terminal Company Umatilla Terminal	**Office Address:** 31031 Launch Lane Umatilla, OR 97882 United States	1	0
Tidewater Terminal Company, Boardman Terminal	**Office Address:** 79827 Ullman Blvd. Boardman, OR 97818 United States	1	0
Curcio, Bob President/Chief Executive Officer, Qualified Individual Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Stephens, Andy Vice President/Business Development , Tidewater Terminal Company Qualified Individual Incident Commander Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Reed, Bruce Vice President/Chief Operations Officer, Tidewater Barge Lines Qualified Individual Incident Commander Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
Collins, Bill Director EHS&S, Qualified Individual Planning Section Chief, Facility Security Officer Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	0	0
Reising, Myron Vice President/Chief Financial Officer, Qualified Individual Finance Section Chief Response Time: 4 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0

FIGURE 1-1 - DISTRIBUTION LIST

PLAN HOLDER	ADDRESS	NUMBER OF PAPER COPIES	NUMBER OF ELECTRONIC COPIES
Schwartz, Marc Port Engineer, Tidewater Barge Lines Qualified Individual Operations Section Chief, Facility Security Officer Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	0	0
Nelson, Craig Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Time: 3 (hours)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	1	0
McClary, Ron Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Time: 1 (hours)	**Office Address:** 671 Tank Farm Road Pasco, WA 99301 United States	1	0
Davis, Mark Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Time: 1 (hours)	**Office Address:** 671 Tank Farm Road Pasco, WA 99301 United States	1	0

FIGURE 1-2 - WASHINGTON PIPELINE INFORMATION SUMMARY

Owner:	Operator:
Tidewater Terminal Company P.O. Box 1210 Vancouver, WA 98666-1210 (509) 545-5042 (Fax) (509) 547-7701 (Phone)	Tidewater Terminal Company P.O. Box 1210 Vancouver, WA 98666-1210 (509) 545-5042 (Fax) (509) 547-7701 (Phone)

Zone Name:	Washington Pipeline
Zone Mailing Address:	P.O. Box 1210 Vancouver, WA 98666-1210
Zone Latitude/Longitude:	(b) (7)(F), (b) (3) [redacted]
Zone Telephone/Fax:	(509) 547-7701 / (509) 545-5042
PHMSA #:	31051
Worst Case Discharge:	(b) (7)(F), (b) (3) [redacted]
Significant and Substantial Harm:	All pipeline segments are either in or within 1 mile from drinking water unusually sensitive areas and all pipeline segments are within 1 mile from a navigable waterway (the Snake and Columbia Rivers). Therefore, in accordance with 49 CFR 194.103(c), each entire response zone described in this Plan will be treated as if expected to cause significant and substantial harm.

FIGURE 1-2 - WASHINGTON PIPELINE INFORMATION SUMMARY, CONTINUED

Qualified Individuals:	Name and Contact Information	Work Address	Home Address
	Collins, Bill Director EHS&S, Qualified Individual Planning Section Chief, Facility Security Officer Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0306 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	(b) (6)
	Curcio, Bob President/Chief Executive Officer, Qualified Individual Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0322 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	
	Davis, Mark Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Time: 1 (hours) 509-547-7701 (Office) (b) (6) (Mobile) 509-544-2215 (Direct) Primary Emergency Coordinator	**Office Address:** 671 Tank Farm Road Pasco, WA 99301 United States	
	McClary, Ron Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Time: 1 (hours) 509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2211 (Direct) Alternate Emergency Coordinator	**Office Address:** 671 Tank Farm Road Pasco, WA 99301 United States	
	Nelson, Craig Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0311 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	

FIGURE 1-2 - WASHINGTON PIPELINE INFORMATION SUMMARY, CONTINUED

Qualified Individuals:	Name and Contact Information	Work Address	Home Address
	Reed, Bruce Vice President/Chief Operations Officer, Tidewater Barge Lines Qualified Individual Incident Commander Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0341 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	(b) (6)
	Reising, Myron Vice President/Chief Financial Officer, Qualified Individual Finance Section Chief Response Time: 4 (hours) 360-693-1491 (Office) (b) (6) (Mobile) 360-759-0353 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	
	Schwartz, Marc Port Engineer, Tidewater Barge Lines Qualified Individual Operations Section Chief, Facility Security Officer Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) (Mobile) 360-759-0336 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	
	Stephens, Andy Vice President/Business Development , Tidewater Terminal Company Qualified Individual Incident Commander Response Time: 3 (hours) 360-693-1491 (Office) (b) (6) Mobile) Home) 360-759-0327 (Direct)	**Office Address:** 6305 NW Old Lower River Road Vancouver, WA 98660 United States	

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

Line Sections/ Products Handled: (Refer to Product Characteristic and Hazards, FIGURE D.8-1)	SECTION	PRODUCTS	TOTAL SEGMENT MILEAGE	COUNTIES / PARISH	STATE
	Tidewater Snake River Terminal to the Cheveron Pipeline Terminal in Pasco 6 inch	Various grades of refined oil	0.93	Franklin County	Washington
	Tidewater Snake River Terminal to the Cheveron Pipeline Terminal in Pasco 6 inch	Various grades of refined oil	0.93	Franklin County	Washington
	Tidewater Snake River Terminal to the Cheveron Pipeline Terminal in Pasco 6 inch	Various grades of refined oil	0.93	Franklin County	Washington
	Tidewaterâ€™s Snake River Terminal to the Burlington Northern refueling depot in Pasco 4 inch	Various grades of refined oil	4.2	Franklin County	Washington

FIGURE 1-2 - WASHINGTON PIPELINE INFORMATION SUMMARY, CONTINUED

Current Operations
The Company operates three 6-inch diameter petroleum lines that extend 4903 feet from the Compay Snake River Terminal to the Tesoro Logistics Northwest Pipeline Terminal in Pasco, Washington. The Company operates a 4-inch diameter pipeline that extends approximately 4.2 miles from the Compay's Snake River Terminal to the Burlington Northern refueling depot in Pasco, Washington. Starting Latitude / Longitude: (b) (7)(F), (b) (3) Ending Latitude / Longitude: (b) (7)(F), (b) (3)

FIGURE 1-2 - WASHINGTON PIPELINE INFORMATION SUMMARY, CONTINUED

Zone Data:	Location (Address and County)	Date of Startup	River Mile
	P.O. Box 1210 Vancouver, Franklin County in Washington, WA 98666-1210	September 28, 2012	N/A
Spill Detection and Mitigation Procedures:	Refer to **SECTION 2.1.1**, **APPENDIX C.2.1** and **APPENDIX C.3.**		
Date Prepared / Last Update:			

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

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

FIGURE 1-3 - OVERVIEW MAP

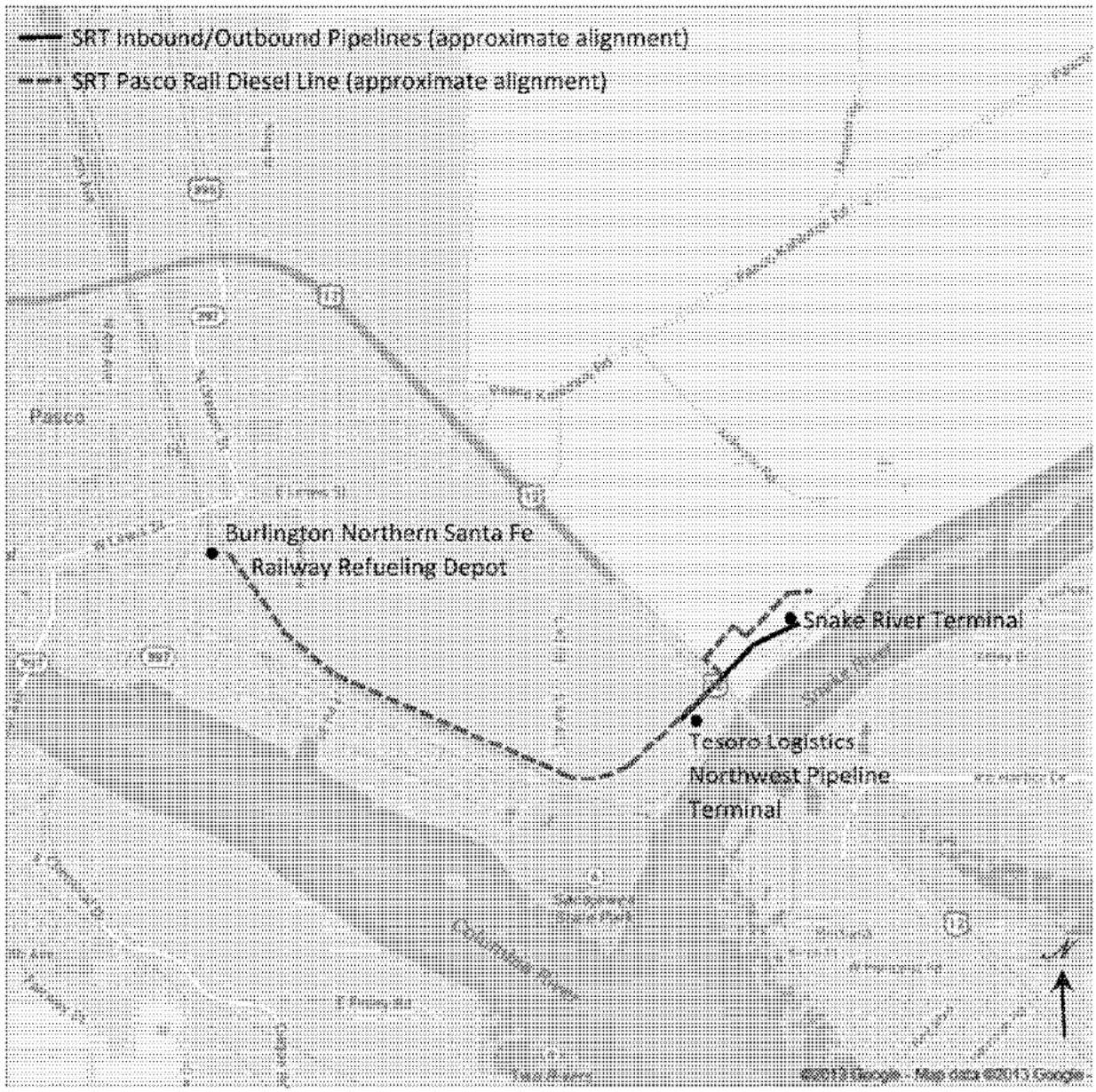


FIGURE 1-4 - PIPELINE SYSTEM OVERVIEW MAP

Click to view/print Alignment Sheet 1 of 2

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

FIGURE 1-4 - PIPELINE SYSTEM OVERVIEW MAP, CONTINUED

Click to view/print Alignment Sheet 2 of 2

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

1.1 PURPOSE / SCOPE OF PLAN

The purpose of this Emergency Response Plan (Plan) is to provide guidelines to quickly, safely, and effectively respond to a spill. The Facility is owned and operated by Tidewater Terminal Company , herein referred to as "Company." This Plan contains prioritized procedures for Facility personnel to mitigate or prevent any discharge resulting from in-facility (terminal) operations, including hazardous waste. A copy of the "Hazardous Waste Contingency Plan" can be found in the Additional Information Appendix. Also, guidelines for waste management can be found in **SECTION 7.3.**

For more information on this plan, contact your supervisor, the Environmental, Health, Safety & Security (EHS&S) Specialist, the Environmental Manager, or the Director, EHS&S.

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

- Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 plan (49 CFR 194)
- Occupational Safety and Health Administration (OSHA) requirements for Emergency Response Plan (ERP) (29 CFR 1910.120) (1)(2)) and Emergency Action Plan (EAP) (29 CFR 1910.38 (a)(2))
- Oregon requirements for vessel and facility contingency plans (Administrative Rule [OAR] 340-141)
- Washington requirement for Oil Spill Contingency Plan (Administrative Code [WAC] 173-182)
- Washington requirement for a fertilizer spill response plan (Administrative Code [WAC] 16-201)

1.2 PLAN REVIEW AND UPDATE PROCEDURE

In accordance with 49 CFR Part 194.121, this Plan will be reviewed annually and modified to address new or different operating conditions or information included in the Plan. The plan will be resubmitted to PHMSA every 5 years from the last approval date. Company internal policy states that the Plan will be reviewed at least annually and modified as appropriate. In the event the Company experiences a Worst Case Discharge, the effectiveness of the plan will be evaluated and updated as necessary. If a new or different operating condition or information would substantially affect the implementation of the Plan, the Company will modify the Plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA and the Washington Department of Ecology (Ecology). Examples of changes in operating conditions that would cause a significant change to the Plan include:

CONDITIONS REQUIRING REVISIONS AND SUBMISSIONS	PHMSA	Ecology
Relocation or replacement of the transportation system in a way that substantially affects the information included in the Plan, such as a change to the Worst Case Discharge volume.	x	x
A change in the Facility's configuration that materially alters the information included in the Plan.		x
A change in the type of oil handled, stored, or transferred that materially alters the required response resources.	x	x
A change in key personnel (Qualified Individuals).	x	x
Material change in capabilities of the Oil Spill Removal Organization(s) (OSROs) that provide equipment and personnel.		x
Material change in the Facility's spill prevention and response equipment or emergency response procedures.		x
Any other changes that materially affect the implementation of the Plan.		x
A change in the name of the Oil Spill Removal Organization (ORSO)	x	x
A change in the Facility's operating area that includes ports or geographics area		x
Any other changes that materially affect the implementation of the Plan.	x	
A change in the NCP or ACP that has significant impact on the equipment appropriate for response activities.	x	

After an annual review of the Plan, amended pages will be distributed to the Washington Department of Ecology (Ecology) for review or approval. If no plan changes are needed, a letter will be sent to Ecology confirming that the existing Plan is still accurate. If there is a temporary or permanent significant change to in the personnel or response equipment described in this Plan, Ecology will be notified in writing within 24 hours of the change and will be provided a schedule for the prompt return of the Plan to full operational status and a proposal for any backfill to compensate for the temporary significant change. Notification by facsimile or e-mail will be considered written notice. If the proposed change to the Plan is to be made permanent, amended pages of the Plan will be distributed to Ecology for review and approval within 30 calendar days from notification to Ecology.

Changes considered to be significant include loss of equipment that results in being out of compliance with any planning standard; if greater than ten percent of available boom, storage, recovery, dispersants, in situ burn or shoreline clean-up equipment is moved out of the homebase as depicted on the Western Response Resources List (WRRL); transfers of equipment to support spill response for out-of-region spills; permanent loss of initial response personnel listed in command and general staff ICS positions provided in the Plan; permanent loss of personnel designated as the binding agreement signer; changes in the oil types handled; permanent changes in storage capacity; changes in handling or transporting of any product; permanent changes in oil processing; changes in equipment ownership if used to satisfy a plan holder planning standard; or modification or discontinuing of any mutual aid, letter of intent or contract agreement.

1.2 PLAN REVIEW AND UPDATE PROCEDURE, CONTINUED

This Ecology-approved plan will be implemented in 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.

The Oregon Department of Environmental Quality (DEQ) requires that it be notified in writing as soon as possible and within 24 hours of any significant change that could affect implementation of the plan, including a significant decrease in available spill response equipment or personnel. A schedule for the prompt return of the plan to full operational status must also be provided. A receipt confirmed e-mail or facsimile will be considered written notice for purposes of this section. Changes that are not considered significant include minor variations in equipment or personnel characteristics, call out lists or operating procedures. Failure to notify the DEQ of significant changes constitutes noncompliance with this rule as well as an inability to comply with an approved plan under OAR 340-141-0210(3).

Within 30 calendar days of an approved change in the plan, the amended pages of the plan must be distributed to the DEQ and other plan holders. Plans must be reviewed by the DEQ every five years pursuant to ORS 468B.345(3). Plans must be submitted for reapproval unless a letter is submitted requesting that the DEQ review the plan already in the DEQ's possession. The plan or such a letter must be submitted at least 90 calendar days before expiration of the plan.

The DEQ may review a plan following any spill for which the Company is responsible. If the plan has been approved, the DEQ may require the Company to renew the signed letter of intent required by OAR 340-141-0100 annually to confirm that there has been no change to the plan or the Company's commitment to its use.

All requests for changes must be made through the agency Terminal Specialist (or equivalent).

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

1.3 BINDING AGREEMENT

Click to view/print 06/10/2013 Binding Agreement

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.

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 owners and operators of the facility or vessel covered by the plan. The agreement is submitted with the plan.

Submitting Party Information

Company Name: Tidewater Barge	
Contact Name: William H. Collins, Director EHS&S	
Address: 6305 NW Old Lower River Road, Vancouver, WA 98660	
Phone Number: 360-693-1491	**Fax Number:** 360-694-8981
Email: bill.collins@tidewater.com	**Website:** www.tidewater.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 and to substantial threats of spills that occur in, or could impact Washington waters or Washington's natural, cultural and economic resources; (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 substantial threat of a spill, and to the training of personnel to implement the plan; (d) the authority and capability to make the necessary and appropriate expenditures in order to implement plan provisions; (e) working in unified command within the incident command system to ensure that all personnel and equipment resources necessary to the response will be called out to clean up the spill safely and to the maximum extent practicable.

Bob Curcio

Authorized Signature

6/10/13

Date

Bob Curcio

Print Name

President & CEO

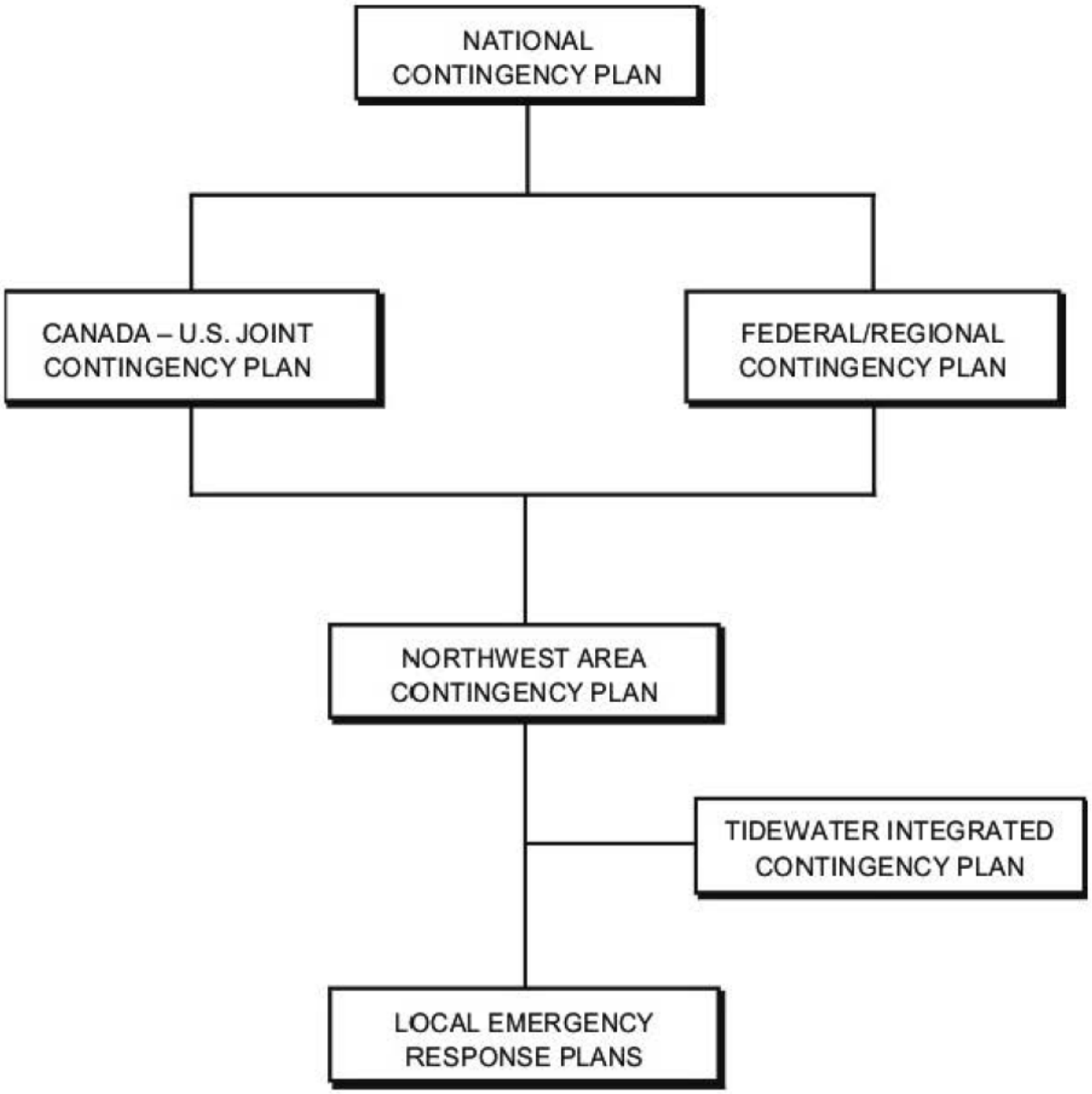
Title

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

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

CERTIFICATION
Pursuant to the Clean Water Act Section 311(j)(5)(F)
Tidewater Terminal Company

The Company, Tidewater Terminal Company, hereby certifies to the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation that it 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 a substantial threat of such a discharge.

1.6 AGENCY SUBMITTAL / APPROVAL LETTERS

No Files Uploaded

FIGURE 1-6 - SUBMITTAL AGREEMENT

Click to view/print Not Applicable

Not Applicable

SECTION 2
INITIAL RESPONSE ACTIONS

Last revised: 09/01/2008

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Figure 2-1 - Initial Response Action Guidelines

2.1 Spill Response

Figure 2.1-1 - Spill Response Action Checklist

2.1.1 Spill Detection and Mitigation Procedures

Figure 2.1-2 - Spill Mitigation Procedures

2.1.2 Spill Surveillance Guidelines

Figure 2.1-3 - Aerial Surveillance Resources

Figure 2.1-4 - Oil Spill Surveillance Checklist

2.1.3 Spill Volume Estimating

Figure 2.1-5 - Spill Estimation Factors

2.1.4 Estimating Spill Trajectories

Figure 2.1-6 - Oil Spill Trajectory Form

2.1.5 Air Monitoring

2.1.6 Initial Containment Actions

2.1.7 Response Considerations

2.2 Fire / Explosion / Vapor Release

2.2.1 Fire, Explosion, and Vapor Release Response Actions

2.2.2 Fire Fighting Tactics

2.2.3 BLEVE - Boiling Liquid Expanding Vapor Explosion

2.3 Medical Emergency / Personal Injury

2.3.1 Medical Emergency / Personal Injury Checklist

SECTION 2

INITIAL RESPONSE ACTIONS, CONTINUED

2.4 Natural Disasters / Severe Weather

2.4.1 Earthquake Procedure

2.4.2 Flooding Procedure

2.4.3 Tornado Checklist

2.5 Security Related Incidents

2.5.1 Threats to Personnel and Facilities

2.5.2 Criminal Acts / Workplace Violence

2.5.3 Sabotage / Bomb Threat / Suspicious Package

2.5.4 Threat Receipt Precautions

Figure 2.5-1 - Threat Documentation Report Form

2.6 Evacuation

2.6.1 Evacuation Checklist

2.6.2 Evacuation Factors

FIGURE 2-1 - INITIAL RESPONSE ACTION GUIDELINES

Initial response actions are those actions taken by personnel immediately upon becoming aware of a discharge or emergency incident, before the appropriate Emergency Response Team (ERT) (described in **SECTION 4**) is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

A field document, provided at the beginning of this document, lists time critical information for the emergency phase of a spill. A laminated copy of this field document is also posted on the bulletin board at the Snake River Terminal's break room for easy access by facility/pipeline personnel.

It is important to properly classify the emergency level to ensure a proper response. The emergency level of the incident will affect the notifications and the initial response to the incident. Emergency information and notification procedures are described in **SECTION 3.1**.

Additionally, for spills to the ground, permeable secondary containment, or the groundwater, the Company shall follow the steps as delineated in **SECTION 3.2** and follow the initial response action guidelines in this section. Notification shall also be made to local agencies as listed in **SECTION 3.2**.

For spills or discharge which cause emissions notification shall be made to local authorities as listed in **SECTION 3.2**. When assessing, investigating, containing and performing remediation of spills to ground water, be sure to follow the potentially triggered guidance as outlined in **SECTION 3.2**.

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

Initial Response Actions - Summary

- Assume responsibility and control of the situation.
- Assess the incident - Personnel and Public Safety is first priority.
- Provide immediate aid to the injured.
- Eliminate any sources of ignition.
- Isolate the source of a discharge, eliminate, or minimize further flow.
- Conduct immediate notification to activate the alarm system and mobilize the Local Terminal Spill Response Team and/or Fire Department, as necessary.
- Control the area - Evacuate as needed and prevent personnel from entering the area until trained responders have arrived.

FIGURE 2-1 - INITIAL RESPONSE ACTION GUIDELINES, CONTINUED

RESPONSE ACTION	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
First Person to Discover Spill:		
1. Sound alarm.		
2. Notify designated Person-in-Charge (most senior person present).		
3. If safe to do so, ensure shut down and control of the source of the spill.		
4. Notify vessel, if applicable.		
5. Evacuate non-essential personnel, vessels, and equipment.		
6. Don personal protective equipment.		
7. Eliminate ignition sources.		
Person-In-Charge (most senior person present):		
8. Report spill to Qualified Individual via Company Dispatch. (Company Dispatch will notify the QI.)		
9. Assess the situation including potential health and safety hazards. (Refer to Material Safety Data Sheets [MSDS].) If someone is injured or if there is the potential for a fire or explosion, call 911.		
10. Initiate immediate clean-up operations using facility and/or vessel personnel for minor or incidental releases.		
Qualified Individual:		
11. Notify: National Response Center (800) 424-8802, (202) 267-2675 National Response Center (800) 424-8802, (202) 267-2675 WA State Dept. of Emergency Management (800) 258-5990, (800) OILS-911 LEPCs (**FIGURE 3.1-4**) Local Emergency Services (**FIGURE 3.1-4**) NOte: The QI may assign these notification responsibilities to Dispatch.		
12. Notify the Liaison Officer.		
13. Investigate source.		
14. Obtain accurate report from Person-in-Charge.		
15. Obtain weather forecasts.		
16. Initiate Spill Tracking and Surveillance Operations (**SECTION 2.1.2**).		
17. Initiate documentation procedures (**SECTION 5.1**).		
18. Activate all or a portion of Incident Command Team (ICT). May include Communication Center, Command Post, assessing equipment & personnel needs and additional steps as needed. Initial Command Post may be established on Company vessels or at any Company facility. See **FIGURE 1-3**. (To establish a more defined Command Post beyond the initial phase of a spill see **SECTION 7.1.4.**)		
19. Ensure ICT has mobilized spill response contractors, if necessary, to assist in containment and cleanup operations. Always be on the side of caution when deciding if response contractors should be called. It is much better to demobilize equipment and personnel, if not needed, than to delay contacting contractors if they are needed.		

FIGURE 2-1 - INITIAL RESPONSE ACTION GUIDELINES, CONTINUED

RESPONSE ACTION	PERSON TAKING ACTION (INITIALS)	DATE/TIME ACTION TAKEN
Qualified Individual, Continued:		
20. Develop response strategy - use available equipment, personnel and logistics to limit the area affected by the spill and the associated impacts. Prioritize actions. Plan for the effective use of additional equipment and supplies as they arrive. As spill warrants, contact spill control experts.		
SECONDARY RESPONSE ACTIONS (Refer to **ICT** job descriptions in **SECTION 4** for detailed checklists of responsibilities).		
Tidewater's Washington Pipeline falls under the jurisdiction of Franklin County Emergency Management (FCEM). FCEM has developed a Comprehensive Emergency Management Plan (CEMP) that provides a framework for the effective utilization of government and private sector resources to mitigate and respond to all emergencies that may affect Franklin County, Washington residents and surrounding communities. This plan provides a description of the arrangements agreed to by local police departments, fire departments, hospitals, medical centers, and state and local emergency response teams.		

2.1 SPILL RESPONSE

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST

SPECIFIC RESPONSE ACTIONS	COMMENT
Line Break or Leak	
Shut down source/pumping equipment.	
Close upstream and downstream valves.	
Utilize Combustible Gas Indicator, O_2 meter, proper colorimetric indicator and other air sampling measurements (as applicable) to assure that areas are safe to enter for continued response operations.	
Mitigate spreading of the product as the situation demands. Potential containment strategies include: • Deployment of boom (Reference ACP for potential strategies); • Diking, trenching, and/or diversion; • Spreading sorbent material over the spill; and • Prevent the spill from entering water to the greatest extent possible.	
Determine the direction and expected duration of spill movement. Refer to **SECTION 2.1.2.**	
Drain the line section, as the situation demands.	
Request local authorities to establish scene security and traffic control in the area, as the situation demands.	
Make all necessary repairs.	
Return the line/rack to service when repairs are complete.	
Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.	
If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in **SECTION 6.** Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.	
Inform local utilities, telephone company, railway, etc., as necessary.	
Complete follow-up and written reporting, as the situation demands.	
Storage Tank Leak	
Shutdown all tank product movement operations and isolate the tank.	
Initiate Confined Space Entry procedures, as applicable.	
Insure that the containment area drainage valve(s) is closed.	
If leak is near tank bottom, create and maintain a 'water bottom' to suspend the discharge of product.	
Utilize Combustible Gas Indicator, O_2 meter, proper colorimetric indicator and other air sampling measurements (as applicable) to assure that areas are safe to enter for continued response operations.	
Block drainage of spilled material from traveling off-site.	
Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.	
Remove product from containment (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/skimmer attachments.	

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST, CONTINUED

SPECIFIC RESPONSE ACTIONS	COMMENT
Storage Tank Leak, Continued	
Determine the direction and expected duration of spill movement. Refer to **SECTION 2.1.2**.	
Request that local authorities establish scene security and traffic control in the area, as necessary.	
Empty tank as soon as possible.	
Make all necessary repairs. Return the line/tank to service when repairs and integrity testing are completed.	
Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables, conduits, etc.	
If necessary, call an approved waste removal company to handle the remaining sludge and residue from the containment area.	
If the spill escapes the containment area, review the location of socioeconomic and environmentally sensitive areas identified in **SECTION 6** and the ACP. Determine which of these may be threatened by the spill and direct the response to these locations. Initiate protection and recovery actions.	
Inform local operators such as utilities, telephone company, railway, as necessary.	
Complete follow-up and written reporting, as the situation demands.	
Leak or Spill at Truck Rack	
Evacuate personnel from the truck rack area, as the situation demands.	
Shutdown all loading operations, pump motors and loading valves.	
Guard against all sources of ignition.	
Secure the area. Stop all traffic from entering rack or hazardous area.	
If a line leak is involved, close off riser valves and/or tank valves.	
Clean area with sorbent material, flush (with water) all remaining product into a separator system.	
Resume truck loading operations.	

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST, CONTINUED

SPECIFIC RESPONSE ACTIONS	COMMENT
Marine Operation Spills/Leaks	
Shut down all engines/motors.	
Close all line and vessel manifold discharge valves.	
If hose rupture is involved, drain line into vessel, drums, or buckets and blank line to stop spill into water.	
Initiate Confined Space Entry procedures according to Company procedures, if applicable.	
Utilize Combustible Gas Indicator, O_2 meter, proper colormetric indicator or photoionization detector and other air sampling measurements (as applicable) to assure that areas are safe to enter for continued response operations according to Company procedures.	
If other than hose rupture, determine source of leak and stop discharge.	
Prevent discharge from entering the water if at all possible by: • Pumping from sump or deck drainage system into drums, tanks, containment area, or other storage facility. • Directing the flow into a containment or collection area away from the water, if feasible. • Placing containment boom or sorbent material around area (provided that a safe operating environment exists).	
If product enters the water and a safe operating environment exists, try to contain by: • Deploying spill response equipment (facility and/or contract) to prevent/mitigate spill impact (spreading of spill).	
Attempting to divert/contain the spill: • In quiet area or low current areas of the water. • Away from strong winds or in areas that could be affected by change in wind direction. • Away from areas of hazard to public, property improvements, marinas, water intakes, or any environmentally sensitive areas.	
Make all necessary repairs.	
Return the line/vessel to service when repairs are complete.	
Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables, etc.	
If the spill escapes the containment area, review the location of socioeconomic and environmentally sensitive areas identified in **SECTION 6** and the ACP. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.	
Request local authorities (USCG, Port Authority, etc.) to establish traffic control in the area, as the situation demands.	
Inform local operators such as utilities, telephone company, railway, as necessary.	
Complete follow-up and written reporting, as the situation demands.	

2.1.1 Spill Detection and Mitigation Procedures

APPENDIX C for spill detection protocols.

This section provides general guidance for spill mitigation. Each spill mitigation situation is unique and must be treated according to the circumstance present. In every situation, however, personnel safety must be assessed as the first priority. The potential for ignition and/or toxic exposure must be promptly evaluated. Spill mitigation procedures are listed in **FIGURE 2.1-2**. Worst case discharge volume calculations and discussion are provided in **APPENDIX C**.

FIGURE 2.1-2 - SPILL MITIGATION PROCEDURES

TYPE	MITIGATION PROCEDURE
Failure of Transfer Equipment	1. Terminate transfer operations and close block valves. 2. Drain product into containment areas, if possible. 3. Notify vessel personnel. 4. Eliminate sources of vapor cloud ignition by shutting down all engines and motors. 5. Keep all vessels and marine traffic out of the area.
Tank/Barge Overfill/Failure	1. Shut down or divert source of incoming flow to tank or barge. 2. Transfer fluid to another tank with adequate storage capacity, if possible. 3. Begin transferring spilled product to another tank as soon as possible.
Piping Rupture/Leak (under pressure and no pressure)	1. Shut down pumps. Close the closest block valves on each side of the rupture. 2. Drain the line back into vessels or contained areas, if possible. Alert nearby personnel of potential safety hazards. 3. If piping is under pressure, and there is a leak in piping, relieve pressure by draining into containment area or back to a tank, if possible, then repair line according to established procedures. Shut down sources of vapor cloud ignition and evacuate personnel, if necessary, until the leak is controlled.
Fire/Explosion	1. Personnel safety is the first priority. Evacuate non-essential personnel or personnel at risk of injury. 2. Shut down transfer or pumping operation. Attempt to divert or stop flow of product to the hazardous area, if it can be done safely. 3. Shut down engines and motors. Eliminate sources of vapor cloud ignition. 4. Control fire before taking steps to contain spill.
Manifold Failure	1. Terminate transfer operations immediately. 2. Isolate the damaged area by closing block valves on both sides of the leak/rupture. 3. Shut down engines and motors. Eliminate sources of vapor cloud ignition. 4. Drain fluids back into containment areas, if possible.
Pipeline abnormal operations	Refer to Tidewater Terminal Co. Operations & Maintenance Manual Snake River Terminal, Section 300 - System Operations and the system operation manuals for the SRT Inbound/Outbound Pipeline or SRT Pasco Rail Diesel Pipeline systems.

2.1.2 Spill Surveillance Guidelines

2.1.2 SPILL SURVEILLANCE GUIDELINES	COMMENT
Facility and Covered Vessel Planning Standards for Aerial Surveillance	
Clean Rivers Cooperative, Inc. (CRC) shall be contacted to provide aerial surveillance services necessary to satisfy requirements of Washington Administrative Code (WAC) 173-182-320 and 321 using the contact information in Section 3.1. CRC maintains a letter of intent with Hillsboro Aviation, Inc., an aircraft service provider, and has the required number of trained observers and resources capable of supporting oil spotting capability for 10 hours per day during the initial 72 hours of an oil discharge. Tidewater's membership in CRC provides for aerial surveillance services from the I-205 Bridge downriver to the mouth of the Columbia River. A separate letter of intent (LOI) between Tidewater and CRC provides for aerial surveillance services from the I-205 Bridge upriver to the Lewiston, Idaho – Clarkston, Washington area. CRC documentation describing the resources necessary to satisfy the aerial surveillance planning standards is provided in Section 3. A copy of the LOI addressing upriver aerial surveillance services is also provided in Figure 2.1-3. Resources identified by CRC for meeting the aerial surveillance planning standard are described below.	
Aerial Surveillance Aircraft	
A letter of intent is maintained by CRC with Hillsboro Aviation, Inc. of Hillsboro, Oregon stating their intent to support CRC for oil spill aerial surveillance. Hillsboro Aviation maintains 12 helicopters suitable for aerial surveillance. The helicopters can support portable computers and global positioning systems (GPS) for extended spill operations. Each is equipped with satellite tracking systems that allow for monitoring real time flight path via the internet. Late-model fuel service vehicles are available to support aerial operations in the event services are required upriver beyond the I-205 Bridge. The helicopters are equipped with cargo hooks, long lines, nets, swivels and other equipment as needed. Hillsboro Aviation assets available to CRC are described in the following table.	

Provider	Quantity	Helicopter Type	Cruising Speed	Staging
Hillsboro Aviation	2	Bell 205 A1++	100 knots	Hillsboro, Oregon
Hillsboro Aviation	2	Bell 407	130 knots	Hillsboro, Oregon
Hillsboro Aviation	4	Bell 206 L4	105 knots	Hillsboro, Oregon
Hillsboro Aviation	1	Bell 206 L3	105 knots	Hillsboro, Oregon
Hillsboro Aviation	3	Bell 206 B3	100 knots	Hillsboro, Oregon

2.1.2 Spill Surveillance Guidelines

2.1.2 SPILL SURVEILLANCE GUIDELINES, CONTINUED	COMMENT
Trained Aerial Observers	
CRC has three trained aerial observers on staff. One additional trained observer, based out of California, is available to CRC 24 hours per day under an LOI. All are trained in accordance with requirements described in 33 Code of Federal Regulations (CFR) 155.1050 (I)(2)(iii). Additional trained observers located throughout the U.S. West Coast are available to CRC through membership in the Associated of Petroleum Industry Cooperative Managers (APICOM) and could cascade into a response if needed. Trained aerial observers available through CRC are described in the following table.	

Trained Observer	Home Base	Training
Ernie Quesada	Portland, Oregon	33 CFR 155.1050 (I)(2)(iii)
Carl Boelter	Portland, Oregon	33 CFR 155.1050 (I)(2)(iii)
Jerry Holmes	Portland, Oregon	33 CFR 155.1050 (I)(2)(iii)
Brian Parscal	Atascadero, California	33 CFR 155.1050 (I)(2)(iii)

2.1.2 Spill Surveillance Guidelines

2.1.2 SPILL SURVEILLANCE GUIDELINES, CONTINUED	COMMENT
Aerial Observation Tools	
Tools used by aerial observers while aboard aircraft to acquire, interpret, record, and communicate oil location to the command post or field observations are pre-staged in Aerial Observer Kits maintained by CRC in Portland, Oregon. The Aerial Observation Kits include;	
• Digital camera capable of still photography and video with extra memory card, • Handheld GPS unit with external antennal and additional batteries, • Handheld compass, • Handheld radio, • Digital recorder, • Cell phone, • Calculator, • Ruler, • Note pads and writing utensils, • Stop watch, • National Oceanographic and Atmospheric Administration (NOAA) job aids, • Local river charts, • Geographical response plans (GRPs) for the Columbia and Snake river systems, • Observers tactical vests, and • Aerial Observation Report forms.	

FIGURE 2.1-3 - AERIAL SURVEILLANCE RESOURCES

Click to view/print Clean Rivers Aerial Surveillance Contract

CLEAN RIVERS
COOPERATIVE, INC.

200 SW Market Street, Suite 190

Portland, OR 97201

Phone: (503) 220-2040

RE: WAC 173-182-320 – Facility Planning Standards for Aerial Surveillance
WAC 173-182-321 – Covered Vessel Planning Standards for Aerial Surveillance

For planning purposes, this is as a summary of the attachments that address the Aerial Surveillance Planning Standards of WAC 173-182. Clean Rivers Cooperative has letters of intent with aircrafts, trained aerial observers and resources capable of supporting oil spotting capability for ten hours per day during the initial seventy-two hours of an oil discharge.

Aerial Surveillance Assets -

A Letter of Intent is maintained by Clean Rivers Cooperative with Hillsboro Aviation in Hillsboro, OR stating their intention of supporting Clean Rivers for oil spill aerial support.

Hillsboro Aviation www.hillsboroaviation.com maintains aerial assets of the type listed in the following attachment. Different models may be substituted.

Trained aerial observers (CRC Spotters) -

Clean Rivers currently has three trained spotters on staff and one available under a Letter of Intent (24 hours a day) that meet the requirements of 33 C.F.R. 155.1050(l)(2)(iii). Names of trained individuals are attached. Copies of training records are available upon request.

Aerial observation tools –

Tools that will be used by the aerial spotters on the aircraft to acquire, interpret, record and communicate oil location and other information to the command post or field operations are pre-staged in Aerial Observer Kits, maintained in Portland, OR. Details on the Aerial Observer Kits is attached.

CLEAN RIVERS
COOPERATIVE, INC.

200 SW Market Street, Suite 190

Portland, OR 97201

Phone: (503) 220-2040

Planning Standards for Aerial Surveillance
Type of Asset Available to Clean Rivers

PROVIDER	QTY	HELICOPTERS	CRUISING SPEED	STAGING
Hillsboro Aviation	2	Bell 205 A1++	100 kt.	**Hillsboro, OR**
Hillsboro Aviation	2	Bell 407	130 kt.	**Hillsboro, OR**
Hillsboro Aviation	4	Bell 206 L4	105 kt.	**Hillsboro, OR**
Hillsboro Aviation	1	Bell 206 L3	105 kt.	**Hillsboro, OR**
Hillsboro Aviation	3	Bell 206 B3	100 kt.	**Hillsboro, OR**

Hillsboro Aviation helicopters have outlets to support portable computers and GPS units and can provide power for extended spill operations. Late-model, fuel service vehicles are available to support in the event we need to go past the 205 bridge on the Columbia upriver to the Tri-Cities, Washington. Cargo hooks, long lines, nets, swivels and other equipment can be provided as needed based on the specific mission.

Hillsboro Aviation aircraft is equipped with satellite tracking systems that allow the dispatch center to monitor the flight in real time via the internet. In addition, Hillsboro Aviation has satellite phone units that can be carried onboard the aircraft to establish contact even in very remote areas.

CLEAN RIVERS
COOPERATIVE, INC.

200 SW Market Street, Suite 190

Portland, OR 97201

Phone: (503) 220-2040

Planning Standards for Aerial Surveillance
Trained Aerial Observers

Name	Home Base	Training
Ernie Quesada	Portland, OR.	33 CFR 155.1050 (l)(2)(iii)
Carl Boelter	Portland, OR.	33 CFR 155.1050 (l)(2)(iii)
Jerry Holmes	Portland ,OR.	33 CFR 155.1050 (l)(2)(iii)
Brian Parscal	Atascadero, CA.	33 CFR 155.1050 (l)(2)(iii)

Aerial observers (spotters) noted above are based in Oregon and California. Additional trained observer resources located throughout the West Coast via APICOM Membership through a MOU that are capable of cascading into the Portland, OR area.

Planning Standards for Aerial Surveillance
Trained Aerial Observers

- Digital camera capable of still photography and video (with extra memory card)
- Handheld GPS unit w/ external antenna additional batteries
- Handheld compass
- Handheld radio
- Digital recorder
- Cell phone
- Calculator
- Ruler
- Note pads and writing utensils
- Stop watch
- NOAA job aids
- Local river charts
- GRP's for the Columbia River
- Reporting forms
- Observers tactical vest

FIGURE 2.1-3 - AERIAL SURVEILLANCE RESOURCES, CONTINUED

Click to view/print Clean Rivers Aerial Surveillance Resources

T I D E W A T E R

July 14, 2013

Ernie Quesada
Clean Rivers Cooperative, Inc.
200 S.W. Market Street, Suite 190
Portland, OR 97201

Re: Letter of Intent to Provide Covered Vessel and Facility Planning Aerial Surveillance

Dear Ernie:

By this letter of agreement ("Agreement"), Clean Rivers Cooperative, Inc. ("Vendor") agrees to provide to Tidewater Barge Lines, Inc. and Tidewater Terminal Co. ("Tidewater") those resources required to satisfy the aerial surveillance requirements of the spill response regulations described in this Agreement ("Resources"), for use in oil spill response activities in the geographic area described below ("Upriver Area"). Tidewater may list Vendor in its individual oil spill response contingency plans ("Tidewater Contingency Plans") as being committed to providing the Resources in the Upriver Area, pursuant to the Washington regulations and under the terms and conditions described below. In return, Tidewater agrees to pay certain training expenses as described below.

1. Upriver Area. The Upriver Area is defined as those portions of the Columbia River and Snake River systems above the I-205 Bridge on the Columbia River to and including Pasco, Washington and from the confluence of the Snake River and the Columbia River up to and including Clarkston, Washington.

2. Resources. During the term of this Agreement, Vendor will provide the following Resources:

   a) Facility Planning Standards for Aerial Surveillance. Aerial oil tracking resources with the capabilities and requirements as provided in WAC 173-182-320.

   b) Covered Vessel Planning Standards for Aerial Surveillance. Access to a helicopter or fixed wing asset, trained aerial surveillance personnel, equipment, logistical sources of additional resources, and the capabilities and requirements as provided in WAC 173-182-321.

3. Availability. The Resources described in this Agreement are made available to Tidewater for an emergency response on an "as available" basis. Vendor does not guarantee the availability of the Resources. Resources will be made available for pre-planned and scheduled drills and training.

4. Use Fees. Fees for use of the Resources will be per Vendor's regular rate schedule, as may be amended from time to time.

5. Shared Drill Costs. Tidewater agrees to pay one-half of the expenses of the Resources used for drills under the Tidewater Contingency Plans within, on or for the Upriver Area.

TIDEWATER

6. Extension of Benefits. Vendor and Tidewater will have the benefit of all exemptions from and limitations of liability to which such persons or entities are entitled under applicable law, statute or regulation, including without limitation responder immunity provisions under federal law (33 USC §91321(c)(4) or state law (RCW 90.56.390 or ORS 4688.425), as amended. Vendor and Tidewater expressly claim and preserve all rights and benefits under all such laws, statutes, and regulations.

7. Cancellation of Other Terms. Either party may cancel this Agreement upon 120 days prior written notice, or as otherwise mutually agreed in writing. All other terms of Resources use will be subject to Vendor's customary terms and conditions, per Vendor's rate schedules for Resources use or as otherwise may be agreed in writing between Vendor and Tidewater.

Please acknowledge your agreement to the terms and conditions of this Agreement by executing a copy of this letter in the space provided below. This Agreement will become effective upon our receipt of your signed, acknowledged copy.

Dated effective: July 14, 2013

Tidewater:

Tidewater Barge Lines, Inc.

William H. Collins
By: WILLIAM H. COLLINS
Its: DIRECTOR, EH&S

Tidewater Terminal Co.

William H. Collins
By: WILLIAM H. COLLINS
Its: DIRECTOR, EH&S

Vendor:

Clean Rivers Cooperative, Inc.

Ernie Quesada
By: Ernie Quesada, General Manager

FIGURE 2.1-4 - AERIAL OBSERVATION REPORT FORM

Date: _____

Time: Start of Flight _____ End of Flight _____ Platform _____

Names of Observer _____ Affiliation _____

_____ _____

Name of Region/Sub-Region _____

Description of Spill

- First, identify by Lat. / Long. the length and width of the spill area. Include compass bearing.
- Second, identify by Lat. / Long. the general shape of the spill by the outer edges as appropriate.
- Identify by Lat. / Long. the Leading Edge, the Source, and the Thickest Oil Concentration.

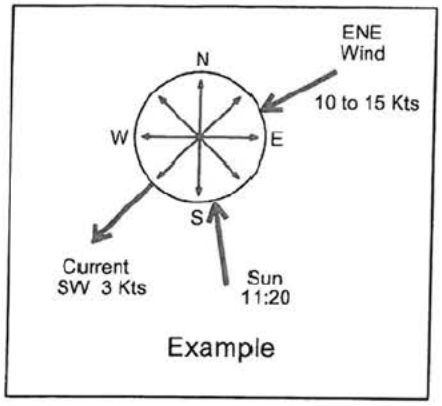
5 N 21° ____.____' W15° ____.____'	1 N 21° ____.____' W15° ____.____'	6 Clockwise from Source N 21° ____.____' W15° ____.____'
4 N 21° ____.____' W15° ____.____'	length / width	3 N 21° ____.____' W15° ____.____'
8 N 21° ____.____' W15° ____.____'	2 N 21° ____.____' W15° ____.____'	7 N 21° ____.____' W15° ____.____'

Is the Source Still Leaking? ☐ Yes ☐ No

9 N 21° ____.____' W15° ____.____'	10 N 21° ____.____' W15° ____.____'	11 N 21° ____.____' W15° ____.____'
The Source	Leading Edge	Thickest Oil Concentration

FIGURE 2.1-4 - AERIAL OBSERVATION REPORT FORM, CONTINUED

On-Scene Weather

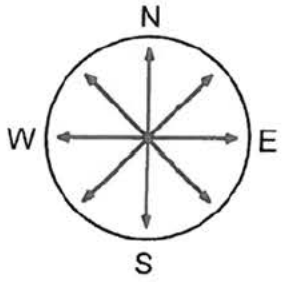


CONTACT OSRV FOR INFORMATION

Indicate the direction the wind is FROM.

Indicate the direction the wind is TO. (If known)

Indicate the direction FROM which the sun is shining.



Sea State: _____

Time of Sighting _____

Oil Observations

Altitude Observations made from: _____

N 21° ___.___ '
W 15° ___.___ '

Location of tracking buoy

Color and appearance (Silver or gray sheen, Rainbow, Metallic, Transitional, Dark or "true", or Emulsion)

Oil Structure (streamers 'st', convergence line, 'cc', windrows 'wr', patches 'pa', tarballs 'tb', no structure 'ns')

Describe by Percentage Area and Percentage of Coverage

(See Percentage Coverage Chart) (Example: 25% = windrows, 90% silver sheen)

_____

_____

_____

General Observations

OSRV Deployment

N 21° ___.___ '	N 21° ___.___ '	N 21° ___.___ '
W 15° ___.___ '	W 15° ___.___ '	W 15° ___.___ '
_____	_____	_____ Voss

OSRV Activities

_____

_____

Wildlife Present in the Area? ☐ Yes ☐ No _____

Has / will oil make landfall? ☐ Yes ☐ No _____

FIGURE 2.1-4 - AERIAL OBSERVATION REPORT FORM, CONTINUED

Incident Name	Date:	Aerial Observation Report Form

Aerial Observer Log

TIME	OBSERVATION / LOG SPEED AND ALTITUDE

2.1.3 Spill Volume Estimating

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

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

Some rapid methods to estimate spill size are:

- Transfer operations: Multiply the pumping rate by the elapsed time that the leak was in progress, plus the drainage volume of the line between the two closest valves or isolation points (volume loss = pump rate [bbls/min] x elapsed time [min] + line contents [bbl]).
- Tank overfills: Elapsed time multiplied by the pumping rate.
- Visual assessment of the surface area and thickness (**FIGURE 2.1-5**); the method may yield unreliable results because:
    - Interpretation of sheen color varies with different observers,
    - Appearance of a slick varies depending upon amount of available sunlight, sea-state, and viewing angle, and
    - Different products may behave differently, depending upon their properties.
- If initial reported estimated quantities or the area extent contamination changes significantly, the regulatory agencies will be notified, including the USCG and WDOE will be provided with updated information.

FIGURE 2.1-5 - SPILL ESTIMATION FACTORS

OIL THICKNESS ESTIMATIONS				
Standard Form	Approx. Film Thickness		Approx. Quantity of Oil in Film	
	inches	mm		
Barely Visible	0.0000015	0.00004	25 gals/mile^2	44 liters/km^2
Silvery	0.000003	0.00008	50 gals/mile^2	88 liters/km^2
Slightly colored	0.000006	0.00015	100 gals/mile^2	179 liters/km^2
Brightly colored	0.000012	0.0003	200 gals/mile^2	351 liters/km^2
Dull	0.00004	0.001	666 gals/mile^2	1,167 liters/km^2
Dark	0.00008	0.002	1,332 gals/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				

2.1.4 Estimating Spill Trajectories

Oil spill trajectories may initially be estimated in order to predict direction and speed of the slick movement. Trajectory calculations provide an estimate of where oil slicks may impact shorelines and other sensitive areas and provide an estimate of the most likely locations for protection, containment and recovery.

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

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

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

- National Oceanic and Atmospheric Administration (NOAA) through the Federal On-Scene Commander (FOSC)
- Private consulting firms; contact information for this company is provided in **FIGURE 3.1-4**.
- **FIGURE 2.1-6** contains a form for providing information necessary to calculate trajectories.

FIGURE 2.1-6 - OIL SPILL TRAJECTORY FORM

INCIDENT INFORMATION

Company: _____ Contact: _____ Phone: _____ Fax: _____

Date/Time of spill: _____

Location of source (latitude/longitude): _____

Last known location of spill (latitude/longitude): _____

_____

Type of oil (API, if known): _____ Estimated volume of initial release: _____

If continuing release, how much? _____ For how long? _____

WEATHER CONDITIONS

Present time: _____ Air temperature: _____

Wind direction: _____ Wind speed: _____

Wave height: _____ Water temperature: _____

Current direction: _____ Current speed: _____

Weather forecast: _____

_____

Additional Information: _____

_____

Submit results to:
Company: _____

Name: _____

Fax number: _____

Office number: _____

Home number: _____

2.1.5 Air Monitoring

Air monitoring should be conducted in the affected area during an incident in which oil or hazardous material has been spilled or potentially could affect the response, prior to engaging in any spill response activity.

It is imperative that all air monitoring equipment is operated and their data interpreted by trained personnel thoroughly familiar with the equipment.

- The air monitoring equipment should be calibrated before and after every use using the equipment manufacturer's recommended procedures and standards.

- Air monitoring measurements which are to be made prior to entry into the spill area include:
    - Lower Explosive Limit (LEL)
    - Oxygen concentration
    - Toxic chemical concentration

- LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.

- Oxygen readings below 19.5% require the use of air supplied respiratory protection.

- Toxic chemical concentration should be evaluated relative to Threshold Limit Value (TLV), Permissible Exposure Limit (PEL), and Immediately Dangerous to Life and Health (IDLH) to evaluate safe working atmospheric levels.

- Where unknown and multiple contaminants may be present, instrument readings should be interpreted conservatively.

The Incident Commander is responsible for industrial hygiene monitoring in the post discovery period and may refer to the Safety Officer.

2.1.6 Initial Containment Actions

Initial containment actions will focus on utilizing on-site equipment to:

- Limit the spread of product, thereby reducing the surface area and the shoreline to be cleaned,
- Concentrate the product (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:

- Safety considerations,
- Whether the product spilled is a refined petroleum product or liquid fertilizer,
- Length of time spill occurs before being secured,
- Amount of spill,
- Area of coverage, and
- Environmental factors, such as wind speed and direction.

Refer to site response guidelines for potential boom locations and configurations. Also, refer to **SECTION 2.1.7** for response considerations for different products.

2.1.7 Response Considerations

General Safety

- Give careful consideration for containment actions conducted during inclement weather or adverse conditions, such as high winds or rapid currents.
- Spills to water or groundwater, a Photo-Ionization-Detection (PID) meter will be used to do initial air monitoring and help in determining use of proper PPE.
- Approach spill from upwind.
- Eliminate all ignition sources and keep boats as far as possible from the spill area.
- Be aware of hazards such as fires, explosions and exposure to toxic chemicals at lethal or sublethal levels.
- Avoid contact with the spilled product and ensure that the area remains secure to boat and air traffic.
- Be aware of potential changes to position and movement of slick due to wind and current action.
- The Safety Officer will assure the safety of all people who may be impacted by the spill.
- The Safety Officer will prepare the Health and Safety Plan and will establish safety zones (as appropriate).
- All response contractor Safety Officers will be advisors to the Company Safety Officer on health and safety issues.
- Consider using trained personnel equipped with supplied air respirators and air monitoring instruments (oxygen and combustible gas meters) to identify and mark/map unsafe areas.

Combustible products (i.e., diesel fuel, kerosene, stove oil)

- Identify source and stop discharge (if possible).
- Deploy facility containment boom and skimmers (if available) to attempt to isolate the slick and reduce the spread and potential impact area; monitor the boom for effectiveness.
- If shorelines may be impacted, consider deploying exclusion boom to reduce the impact to shoreline.
- If there is still boom remaining, attempt to isolate pockets of oil where possible to facilitate more efficient recovery.
- If product escapes deploy sorbents along the shoreline to capture product during tidal cycles; monitor the sorbents periodically for effectiveness and replace as needed.
- If product is ignited, Site Safety Officer should consider the need for responders to use respiratory protection.
- Activate response contractors to assist in containment efforts and begin recovery operations.
- Advise neighboring operators of any threat to their property or personnel.
- Determine the direction and expected duration of spill movement.
- Request USCG to establish vessel traffic control in the area.
- Review the location of environmentally and economically sensitive areas in **SECTION 6**; use the information in this section to assist in prediction of potentially impacted areas.
- Determine which of these areas may be threatened by the spill and direct contractors to proceed with boom and skimmers to these specified locations.

Flammable products (i.e., gasoline, ethanol)

- Identify source and stop discharge (if possible).
- If shorelines may be impacted, consider deploying exclusion boom to reduce the impact to shoreline.
- If product escapes, deploy sorbents along the shoreline to capture product during tidal cycles; monitor the sorbents periodically for effectiveness and replace as needed.
- If product is ignited, Site Safety Officer should consider the need for responders to use respiratory protection.
- Activate response contractors.
- Call the local fire department.
- Advise neighboring operators of any threat to their property or personnel.

2.1.7 Response Considerations, Continued

Flammable products (i.e., gasoline, ethanol), Continued

- Determine the direction and expected duration of spill movement.
- Request USCG to establish vessel traffic control in the area.
- Review the location of environmentally and economically sensitive areas in **SECTION 6**; use the information in this section to assist in prediction of potentially impacted areas.
- Determine which areas may be threatened by the spill and evaluate deploying diversion/exclusion boom to these specified areas.
- Evacuate on-scene personnel.
- Resist the urge to rush into the spill area, stay upwind.
- Secure the spill area, keep people outside the safety perimeter.

Liquid fertilizer products: (i.e. UAN-32)

- Identify source and stop discharge (if possible).
- Prevent product from entering waterways.
- Activate response contractors to assist in containment efforts and begin recovery operations.
- Advise neighboring operators of any threat to their property or personnel.
- Determine the direction and expected duration of spill movement.
- If product enters waterway, advise downstream users of potential threat.

Chemicals

- Resist the urge to rush into the spill area, stay upwind.
- Secure the spill area, keep people outside the safety perimeter.
- Identify the hazards and assess the situation.
- If appropriate, advise neighboring operations of any threat to their property or personnel and request USCG establishes vessel traffic control in the area.
- Obtain help; confer with the MSDS, "North American Emergency Response Guidebook," and CHEMTREC®.
- Decide on site entry, enter the area only when wearing appropriate protective gear.
- Respond; frequently reassess the situation and modify the response accordingly; and continually consider personnel safety, including your own.
- Do no harm – for example, avoid inhaling fumes and touching material.

2.2 FIRE / EXPLOSION / VAPOR RELEASE

2.2.1 Fire, Explosion, and Vapor Release Response Actions

SPECIFIC RESPONSE ACTIONS	COMMENT
FIRE / EXPLOSION	
1. Discontinue all tasks in progress (hot work, truck loading, maintenance, etc.)	
2. Sound local fire alarm, if available.	
3. Attempt to extinguish incipient stage fires, if trained to do so.	
4. Report the condition to Management and take further defensive actions as instructed.	
5. Engage emergency shutdown systems and/or manually (from a safe distance) isolate fuel sources and shut down engines and heaters.	
6. Evacuate personnel to designated assembly areas.	
7. Account for personnel.	
8. Initiate rescue activities as necessary, if properly trained.	
9. Make appropriate notifications to local fire and Emergency Medical Services (EMS). Make other internal management contacts as appropriate. (**SECTION 3**)	
10. Establish a secure perimeter around the area to prevent unauthorized entry.	
11. Initiate Site Security Plan. (**SECTION 5**)	
12. Continue measures to contain the fire; apply water from a safe distance to protect adjacent equipment, if necessary.	
13. Recognize fire conditions which present boiling liquid expanding vapor explosion (BLEVE) hazards and protect personnel and the public appropriately. (**SECTION 2.2.3**)	
14. Contain spilled material and runoff. Dike far ahead of the release, as necessary.	
15. Make appropriate government agency notifications. (**SECTION 3**)	
16. Conduct post-incident activities. (**SECTION 8**)	
At a Manned Facility:	
1. Evaluate the situation; approach cautiously from upwind; do not rush in.	
2. Notify the local police and fire departments.	
3. Notify Supervisory Personnel.	
4. Appropriately trained personnel may attempt to extinguish the fire if it is in the incipient (early) stage and if it can be done safely.	
5. If the fire/explosion is a result of a pipe rupture, isolate product release by closing valves.	
6. Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	
7. Account for personnel.	
8. Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary.	
9. Call in additional resources if on scene personnel and equipment are inadequate to handle the emergency.	

2.2 FIRE / EXPLOSION / VAPOR RELEASE

2.2.1 Fire, Explosion, and Vapor Release Response Actions

SPECIFIC RESPONSE ACTIONS	COMMENT
FIRE / EXPLOSION	
At a Manned Facility, Continued:	
10. Conduct a post-emergency evaluation and report.	
At an Unmanned Facility:	
1. Handle the call.	
2. Notify the local police and fire departments.	
3. Notify Supervisory Personnel.	
4. Go to the incident scene to evaluate the situation; approach cautiously from upwind; do not rush in.	
5. Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	
6. If roads or railroads are in the affected area, assist the sheriff or local emergency officials with halting traffic.	
7. Update Supervisory Personnel/Management.	
8. If the fire/explosion is a result of a pipe rupture, isolate the product release by closing valves.	
9. Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary.	
10. Call in additional resources if on scene personnel and equipment are inadequate to handle this emergency.	
11. Conduct a post-emergency evaluation and report.	
VAPOR RELEASE	
1. Report the release to Manager.	
2. Sound the facility alarm.	
3. Do not assume vapors or gases are harmless because of lack of odor - **Harmful vapors or gases may be odorless.**	
4. Evacuate personnel from the immediate area to the designated assembly area or to a location upwind of the release.	
5. Account for personnel.	
6. Engage emergency shutdown systems and/or manually isolate release from a safe distance.	
7. Isolate all sources of potential ignition.	
8. Establish a secure perimeter around the area to prevent unauthorized entry.	
9. Complete internal and external notifications, as appropriate.	
10. Assess the threat to the public and notify public officials as appropriate.	
11. Initiate evacuation of surrounding homes, businesses, etc., with assistance from local law enforcement officials, as necessary.	
12. Conduct post-incident activities. (**SECTION 8**)	

2.2.2 Fire Fighting Tactics

Upon discovering a fire:

- Attempt to extinguish incipient stages of fire, only if trained to do so.
- Block in the fuel source by tripping the emergency shutdown device (ESD) or manually from a safe distance.
- Protect the surrounding exposed areas and cool the burn area to control the fire.
- Withdraw personnel and notify local fire department.

Safety Guidelines:

- Any efforts made to rescue personnel and protect property or the environment must be weighed against the possibility that you could become part of the problem.
- Evacuate and account for personnel as necessary.
- Continually reassess the situation and modify the response accordingly.
- **Do not walk into or touch spilled materials.**
- Do not assume vapors are harmless because of a lack of odor - **Harmful gases or vapors may be odorless.**

2.2.3 BLEVE - Boiling Liquid Expanding Vapor Explosion

BLEVE occurs when:

- Sealed containers of liquefied gases are accidentally exposed and enveloped by fire.
- Vapor is generated and internal pressure rapidly rises.
- The container wall temperature rises in the outage or unfilled area.
- Wall strength deteriorates and the stress applied by the increased pressure exceeds the reduced strength of the wall.
- The container ruptures and super-heated liquid is released, expands and vaporizes in seconds resulting in catastrophic damage from the spread of ignited vapors. The ruptured vessel or tank could propel dangerous shrapnel significant distances. It is important that:
    - Vessels or tanks are kept cool and
    - External fires are extinguished quickly.

Fire Fighters should do the following:

- Fight fire from the maximum distance possible or use unmanned hose holders or monitor nozzles.
- Cool containers by flooding them with large amounts of water until well after the fire is out.
- Do not direct water at the source of leak or at safety devices; icing may occur.
- Leave the area immediately if you hear a rising sound from venting safety devices or see discoloration of the tank.
- For massive fires, use unmanned hose holders or monitor nozzles; if this is impossible, leave the area and let the fire burn.
- Be aware that when a BLEVE occurs, sections of the tank can fly in any direction. Just avoiding the ends of the tank should not be considered a safe operating procedure.

Always consider your own safety and the safety of people in the immediate area first.

2.3 MEDICAL EMERGENCY / PERSONAL INJURY

2.3.1 Medical Emergency / Personal Injury Checklist

SPECIFIC RESPONSE ACTIONS	COMMENT
General	
Medical emergencies may involve and/or be categorized as follows: a. **First Aid** - One or more patients with minor injuries which can be effectively managed with the application of routine First Aid. This type of injury does not require medical transport to a hospital, but may require follow-up with a Physician. b. **Serious** - One or more patients with moderate to serious injuries, requiring response by local Emergency Medical Services (EMS) and may include transport to a hospital for advanced care and treatment. c. **Life-Threatening** - One or more patients with serious or life-threatening injuries, requiring response by local Emergency Medical Services (EMS) and includes transport to a hospital for advanced care and treatment.	
Assess the scene; protect yourself.	
Summon local Emergency Medical Services (EMS) to the scene; provide information on the nature of injuries and number of injured persons (**SECTION 3**).	
If trained, provide First Aid/CPR as necessary, until EMS arrives at the scene. Do not remove the patient unless a situation (such as a fire) threatens the patient's life.	
As the situation warrants, try to stop the bleeding and keep the patient breathing until the EMS arrives at the scene.	
The rescuer's role includes: • Removing the patient from any situation threatening patient's life or the lives of rescuers. • Correcting life-threatening problems and immobilizing injured parts before transporting the patient. • Transporting the patient in a way that minimizes further damage to injured parts. • Administering essential life support while the patient is being transported. • Observing and protecting the patient until medical staff can take over. • Administering care as indicated or instructed.	
Initiate Medical Evacuation (via air or ground transport) as recommended by EMS personnel.	
Establish a secure perimeter around the area to prevent unauthorized entry. Initiate the Site Security Plan, as necessary (**SECTION 5**).	
Notify Manager and make appropriate notifications to local emergency agencies if necessary. Make other internal management contacts as appropriate (**SECTION 3**).	
In case of a fatality: • Do not move the victim. • Do not release name of victim(s). • Contact local law enforcement. • Contact local medical authority. • Preserve the accident site. • Restrict all communications concerning the incident (do not release names of victims unless authorized).	
Conduct post-incident activities (**SECTION 8**).	

2.4 NATURAL DISASTER / SEVERE WEATHER

2.4.1 Earthquake Procedure

SPECIFIC RESPONSE ACTIONS	COMMENT
1. Activate the emergency alarm, if available.	
2. Evacuate personnel from the immediate area to the designated assembly area.	
3. Account for personnel.	
4. Evaluate the extent of the emergency.	
5. If time permits, engage emergency shutdown systems and/or manually isolate processes and equipment.	
6. Notify the Manager and make other internal notifications, as appropriate. (**SECTION 3**)	
7. Conduct an inspection for residual safety hazards, such as: • Process safety/integrity; • Structural damage; • Downed power lines; and • Leaking natural gas, water, and sewer lines.	
8. Arrange for necessary repairs.	
9. Conduct post-incident activities. (**SECTION 8**)	

2.4.2 Flooding Procedure

SPECIFIC RESPONSE ACTIONS	COMMENT
1. Perform continuous monitoring of the situation by listening to radio and/or television reports. • Flash flood watch means flooding is possible. • Flash flood warning means flooding is occurring or is imminent.	
2. Account for personnel.	
3. Notify Supervisory Personnel and make other internal notifications, as appropriate. (**SECTION 3**)	
4. Evaluate the extent of the emergency. Update Supervisory Personnel when flooding is imminent.	
5. Prepare an evacuation plan based upon flood crest and weather forecast.	
6. Take preliminary actions to secure the facility before flooding and mandatory evacuation.	
7. Consider having sandbags brought to the sites that could be affected by the flooding.	
8. Consider obtaining portable pumps and hoses from local supplies or from other petroleum service locations in the area.	
9. Remove product from underground storage tanks (i.e., sumps and separators, if applicable) and replace with water to prevent them from floating out of the ground.	
10. Keep at least a normal bottom in all above ground tankage, more if possible. Maintain tank levels, as appropriate (consider filling tanks that might float with water).	
11. Secure all loose items in the area that could do harm to other equipment (pipe, tools).	
12. Engage emergency shutdown systems and/or manually isolate processes and equipment, if necessary.	
13. Plug all rack drains and facility drains connected to the sump.	
14. Anchor all bulk additive tanks, fuel barrels, empty drums, and propane tanks (if applicable).	
15. Notify Supervisory Personnel/Management that the facility will be closed.	
16. Back up computer files.	
17. Remove assets such as files, computers, and spare parts.	
18. Shut off high voltage power and natural gas lines.	
19. Close all valves on product and additive storage tanks.	
20. Before evacuation, know where all the employees will be residing and obtain phone numbers so they can be contacted if additional emergencies occur.	
21. Evacuate personnel, as necessary.	
22. Conduct a post-emergency evacuation and report.	
23. Maintain hazards awareness. Conduct an inspection for residual safety hazards, such as: • Structural damage; • Downed power lines; • Leaking natural gas, water, and sewer lines; • Poisonous snakes and other wildlife sheltering in structures, vehicles, and furniture; and • Avoid direct contact with flood water, mud, and animal carcasses.	
24. Arrange for necessary repairs.	
25. Conduct post-incident activities. (**SECTION 8**)	

2.4.3 Tornado Checklist

SPECIFIC RESPONSE ACTIONS	COMMENT
1. Monitor news media reports. o Tornado watch means conditions are favorable for tornadoes. o Tornado warning means a tornado has been sighted.	
2. When a tornado warning is issued, activate the emergency alarm, if available, to alert all personnel.	
3. Notify and establish communications with the Manager.	
4. Take shelter: o Go to an interior room on the lowest floor. o Get under a sturdy peice of furniture. o Use your arms to protect head and neck.	
5. If time permits, engage emergency shutdown systems and/or manually isolate processes and equipment.	
6. Have location personnel report to the designated area. Initiate evacuation procedures, if necessary (**SECTION 2.6**), to designated storm shelter.	
7. Account for all personnel on duty.	
8. Make appropriate internal notifications. (**SECTION 3**)	
9. Look for funnel formations on the ground or in the clouds; listen for a roar that sounds like a jet aircraft or rail traffic.	
10. If the facility is damaged by the tornado, notify Supervisory Personnel.	
11. Go to the scene of the incident to evaluate the situation. • Be aware of broken glass and downed power lines. • Check for injuries. • Use caution entering a damaged building.	
12. Conduct an inspection for residual safety hazards, such as: • Process safety/integrity, as necessary; • Structural damage; • Downed power lines; and • Leaking natural gas, water and sewer lines.	
13. Update Supervisory Personnel/Management.	
14. Perform Initial Response Actions.	
15. Conduct post-emergency evaluation and report. (**SECTION 8**)	

2.5 SECURITY RELATED INCIDENTS

2.5.1 Threats to Personnel and Facilities

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

[redacted]

2.5.1 Threats to Personnel and Facilities, Continued

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

[redacted]

2.5.1 Threats to Personnel and Facilities, Continued

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

[redacted]

2.5.2 Criminal Acts / Workplace Violence

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

[redacted]

2.5.3 Sabotage / Bomb Threat / Suspicious Package

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

[redacted]

2.5.3 Sabotage / Bomb Threat / Suspicious Package, Continued

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

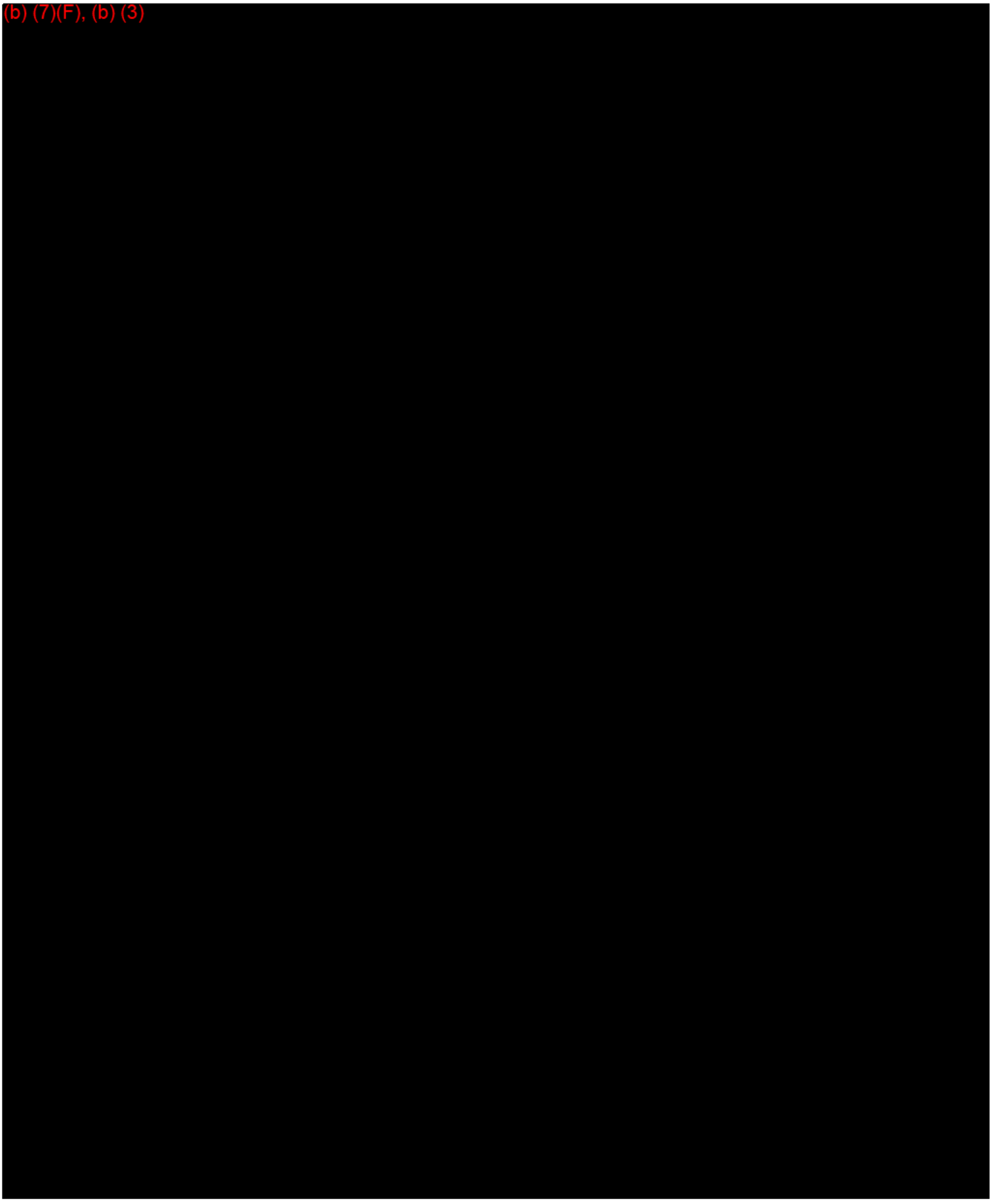
[redacted]

2.5.4 Threat Receipt Precautions

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

FIGURE 2.5-1 - THREAT DOCUMENTATION REPORT FORM

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



2.6 EVACUATION

This evacuation plan shall be implemented in the event of an incident which requires the evacuation of one or more areas of the Facility.

The primary responsibility of the Incident Commander is to account for all employees and visitors in the emergency area.

Evacuation Planning

The primary evacuation routes were developed with the following factors taken into consideration:

- location of stored materials;
- hazard imposed by spilled material;
- spill flow direction;
- prevailing wind direction and speed;
- water currents, tides, or wave conditions (if applicable);
- arrival route of emergency response personnel and response equipment;
- evacuation routes;
- alternative routes of evacuation;
- transportation of injured personnel to nearest emergency medical facility;
- location of alarm/notification systems;
- the need for a centralized check-in area for evacuation validation (roll call);
- selection of a mitigation command center; and
- location of shelter at the facility as an alternative to evacuation.

All employees and contractors have been trained to evaluate the safety of the primary route prior to using it for evacuation.

2.6.1 Evacuation Checklist

NOTE: The procedure described below is usually implemented by the Terminal Specialist (or equivalent). An On-Scene Commander may have to implement some or all of the procedure in the absence of the Terminal Specialist (or equivalent).

SPECIFIC RESPONSE ACTIONS	COMMENTS
Initial Actions: • Establish command and control • Ensure safety of responders • Organize and manage response operations • Communicate effectively	
Designate and activate emergency channel on radios.	
Assess threat to facility personnel.	
Activate Warden(s).	
Request assistance from off-site agencies; convey Command Post's location.	
Determine need to initiate muster and/or shelter-in-place operations.	

2.6.1 Evacuation Checklist, Continued

SPECIFIC RESPONSE ACTIONS	COMMENTS
Determine effect of following factors on safety of muster and/or shelter area(s): • Fire • Smoke • Toxic vapors or gas or vapor • Structural damage	
If appropriate, initiate muster and/or shelter-in-place procedure.	
Assemble personnel at predetermined safe location: upwind/up gradient of release (regrouping area).	
Account for Company and contractor personnel.	
Receive regular status reports from Muster and/or Shelter Area Manager(s): • Headcount • Missing personnel • Injured personnel • Problems or needs	
Assess casualties (number/type/location).	
Determine probable location of missing personnel.	
Secure site, establish re-entry point and check-in/check-out procedures.	
Determine availability of transportation resources that may be needed to evacuate facility.	
Review weather conditions. Monitor situation (weather, vapors, product migration) for significant changes.	
Review status of escape route(s).	
Assist in developing a Rescue Plan, if necessary.	
Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.).	
Determine need for offsite resources needed to assist in evacuation: • Nature • Number • Capacity • Mobilization time	
Notify offsite resources: • Place or standby • Activate	
Constantly evaluate nature and severity of incident and status of at-the-scene tactical response operations.	
Constantly assess threat to TRT responders and personnel in muster and/or shelter area(s).	
Keep Muster and/or Shelter Area Manager(s) informed of status.	
Determine need for evacuation.	
If evacuation is appropriate, notify Muster and/or Shelter Area Manager(s).	

2.6.1 Evacuation Checklist, Continued

SPECIFIC RESPONSE ACTIONS	COMMENTS
If evacuation is appropriate, recheck: • Status of muster and/or shelter-in-place activities • Status of transportation resources • Status of escape route(s) • Status of weather • Status of offsite resources needed to assist in evacuation	
Review personnel allocations to transportation resources to be used for evacuation.	
Advise reception facility(ies).	
Account for Company and contractor personnel.	
Provide regular updates to CMT Operations.	
NOTE: Muster and/or Shelter Area Manager(s) also will be providing regular status reports to IMT Operations.	
Determine whether a partial or full evacuation is appropriate.	
Establish direct line of communications with and receive regular updates from contact person on each transportation resource being used to evacuate personnel until they reach destination point.	
If partial evacuation is appropriate: • Order evacuation • Confirm names of personnel abandoning facility • Confirm names of personnel remaining at/on facility • Monitor morale of personnel remaining at/on facility	
If full evacuation is appropriate: • Order evacuation • Confirm names of personnel abandoning facility • Ensure that all personnel are accounted for and abandon facility • Notify CMT Operations • Arrange for a transfer of command to appropriate person/position	

2.6.2 Evacuation Factors

EVACUATION FACTORS	
FACTOR	**DESCRIPTION**
Alarm/Notification system location	• The Snake River Terminal is equipped with a manually activated alarm system. The alarm sounds throughout the facility. Six evacuation alarm buttons are located throughout the facility; one each at the following locations: 1) Outside the Main Office, 2) East end of the Petroleum Tank Farm, 3) West end of the Petroleum Tank Farm, 4) Petroleum Truck Loading Rack, 5) Burlington Northern (BN) Railcar Loading Rack, and 6) Petroleum Dock. Additional emergency notifications are made to employees, contractors, drivers, and visitors by two-way radios, cell phones, and verbal communications. • Refer to **APPENDIX C.3** for a description of warning alarms at the Facility.
Community evacuation plans	• Company may request local police, county sheriff and/or state police assistance (**FIGURE 3.1-4**). Community evacuations are the responsibility of these agencies. • The community evacuation plan for Franklin County, Washington is found in the Franklin County Comprehensive Emergency Management Plan (CEMP). The CEMP establishes a framework for an effective system under which Franklin County and its municipalities will be prepared to respond to an occurrence of natural, man-made, and/or technological emergencies or disasters. The plan defines roles and responsibilities of local, State, and Federal government and volunteer organizations. • Emergency Support Function (ESF) 1 of the Franklin County Comprehensive Emergency Management Plan (CEMP) addresses transportation during emergencies and defines the roles and responsibilities of Franklin County Emergency Management and various supporting agencies to establish and maintain effective utilization of all available transportation resources during emergencies. Franklin County Emergency Management should be contacted in the event of an emergency at Snake River Terminal. The CEMP can be referenced at the following link. http://www.franklinem.org/pdf/2011-cemp-complete.pdf
Mitigation Command Center location	• Initial Command Center located at: Snake River Terminal Main Office building • Mobile Command Posts may be established as necessary.

SECTION 3

Last Revised: 09/01/2008

NOTIFICATIONS / TELEPHONE NUMBERS

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3.1 Emergency Information and Notification Procedures

Figure 3.1-1 - Emergency Notification Flow Chart

Figure 3.1-2 - Spill / Incident Telephonic Notice

Figure 3.1-3 - Internal Notifications and Telephone Numbers

Qualified Individuals

Corporate Resource Personnel

Snake River Terminal Personnel

Other Tidewater Terminal Company Personnel

Figure 3.1-4 - External Notifications and Telephone Numbers

Mandatory Notifications

Notifications As Appropriate

Oil Spill Removal Organizations (OSROs)

Figure 3.1-5 - Reporting Requirements

3.2 Notification Requirements for Spills to Ground

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES

The notification sequence for a spill is as follows:

- Facility personnel will identify and control the source of a spill, if safe to do so, then will notify the Supervisory Personnel.

- The Person-in-Charge will conduct notifications as illustrated in the Emergency Notification Flow Chart (**FIGURE 3.1-1**).

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

This section also contains the following:

- **FIGURE 3.1-2** provides a notification summary and documentation form to assist in documenting notifications.

- **FIGURE 3.1-3** provides the Internal Notifications and Telephone Numbers list.

- **FIGURE 3.1-4** provides the External Notifications and Telephone Numbers list.

- **FIGURE 3.1-5** provides reporting requirements.

Semi-annually, call agencies and oil spill response contractors (OSROs) listed in the External Notifications and Telephone Numbers of the Facility Response Plan to verify that phone numbers are current.

FIGURE 3.1-1 - EMERGENCY NOTIFICATION FLOW CHART

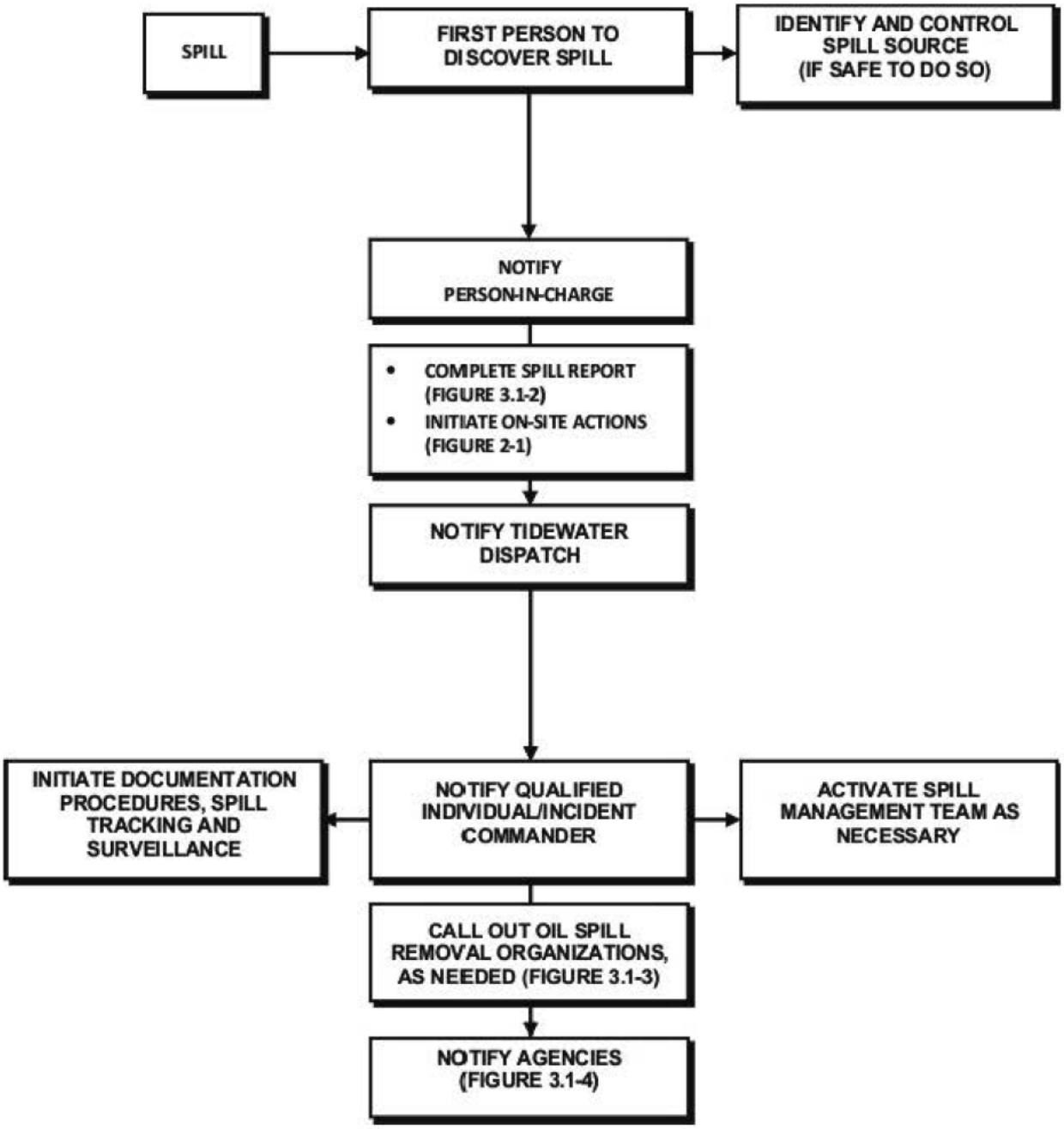

FIGURE 3.1-2 - SPILL / INCIDENT TELEPHONIC NOTICE

Do not delay making notifications while obtaining the information and completing this form.

INVOLVED PARTIES	
Reporting Party	**Suspected Responsible Party**
Name:	Name:
Phone: (Day)	Phone: (Day)
(Evening)	(Evening)
Position:	Company:
Company:	Facility Identification Number:
Address:	Organizational Type: ☐ Private Citizen ☐ Private Enterprise ☐ Public Utility ☐ Local Government ☐ State Government ☐ Federal Government
Person Discovering Incident	
Name:	
Company/Organization:	
City: State: Zip:	
Were materials released? ☐ Yes ☐ No	Calling for Responsible Party ☐ Yes ☐ No
Confidential: ☐ Yes ☐ No	Meeting Federal Obligation to Report: ☐ Yes ☐ No

INCIDENT DESCRIPTION	
Date: Time: ☐ AM ☐ PM	Weather:
Incident Address/Location:	Latitude: _____ degrees _____ min ____ sec N
	Longitude: _____ degrees _____ min ____ sec W
Mile Post/River Marker:	
Nearest City/County/Zip Code:	Distance from City:
Nearest State:	Direction from City:
Source and Cause of Incident:	
Name of Pipeline (if applicable):	
Name of Pipeline Operator (if applicable):	
Storage Tank Type: ☐ Above Ground ☐ Below Ground ☐ Unknown	
Tank Capacity:	Facility Capacity:

MATERIAL INFORMATION

CHRIS Code	Product Released	Released Quantity (Include units of measure)	Quantity in Water (Include units of measure)

FIGURE 3.1-2 - SPILL / INCIDENT TELEPHONIC NOTICE, CONTINUED

INITIAL IMPACT	
Number of Injuries:	Number of Deaths:
Were there Evacuations? ☐ Yes ☐ No	Number Evacuated:
Was there any Damage? ☐ Yes ☐ No	
Damage in dollars (estimate):	
Is the Spill Contained within the boundaries of the facility? ☐ Yes ☐ No	
Direction of Flow:	

RESPONSE ACTION(S)
Action(s) Taken to Correct, Control or Mitigate Incident:

ADDITIONAL INFORMATION
Any information about the incident not recorded elsewhere in the report (e.g., duration of spill, treatment or disposal measures).

COMPLETED NOTIFICATIONS (Date and time of each NRC notification)

Report	Phone Number	Date	Case Number	Time	Name	Title
NRC ☐	(800) 424-8802*					
WDEM ☐	(360) 407-6300					

FIGURE 3.1-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

- Qualified Individuals
- Corporate Resource Personnel
- Snake River Terminal Personnel
- Other Tidewater Terminal Company Personnel

Qualified Individuals

* 24-hour number

QUALIFIED INDIVIDUALS	
Qualified Individuals	
Mark Davis Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) 509-544-2215 (Direct) Primary Emergency Coordinator
Ron McClary Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2211 (Direct) Alternate Emergency Coordinator
Andy Stephens Vice President/Business Development , Tidewater Terminal Company Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0327 (Direct)
Bob Curcio President/Chief Executive Officer Qualified Individual Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0322 (Direct)
Myron Reising Vice President/Chief Financial Officer Qualified Individual Finance Section Chief Response Time: 4 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0353 (Direct)
Bruce Reed Vice President/Chief Operations Officer, Tidewater Barge Lines Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0341 (Direct)
Bill Collins Director EHS&S Qualified Individual Planning Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0306 (Direct)
Craig Nelson Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0311 (Direct)
Marc Schwartz Port Engineer, Tidewater Barge Lines Qualified Individual Operations Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0336 (Direct)

Corporate Resource Personnel

* 24-hour number

CORPORATE RESOURCE PERSONNEL	
Company Personnel	
Marco Ullmer Business Development Manager - Liquids Liaison Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0326 (Direct)
Stu Sanborn Liquid Products Coordinator Planning Section Chief, Logistics Section Chief, Demobilization Unit Leader Response Time: 4 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0303 (Direct)
Carol Bua Public Affairs Manager Public Information Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0310 (Direct)
Geoff Doerfler Dispatch Manager Planning Section Chief, Logistics Section Chief Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0301 (Direct)
Greg Zanavich Business Development Manager - Grain/Special Projects Public Information Officer, Situation Unit Leader Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0323 (Direct)
David Konz Claims Manager, Tidewater Barge Lines, Inc. Situation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0307 (Direct) P&I Club: West of England, Local Correspondent: Law Office of Schwabe Williamson & Wyatt
Brian Rankin Quality Manager Liason Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0338 (Direct)
Stephanie Syring Environmental Manager Environmental Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0305 (Direct)
Gary Stonewall EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-619-7175 (Direct)

Corporate Resource Personnel, Continued

* 24-hour number

CORPORATE RESOURCE PERSONNEL, CONTINUED	
Company Personnel, Continued	
Kelly Kilgore EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)
Joshua Jarman EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2213 (Direct)

Snake River Terminal Personnel

* 24-hour number

SNAKE RIVER TERMINAL PERSONNEL	
Snake River Terminal	
Kelly Harding Leadman/Tankerman , Tidewater Terminal Company - Snake River Terminal Shoreside Recovery Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)
Tim Berry Maintenance Leadman , Tidewater Terminal Company - Snake River Terminal Salvage/Source Control Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2214 (Direct)
Roger Kentch Barge Chaser, Tidewater Barge Lines On-Water Recovery Group Supervisor, Salvage/Source Control Group Supervisor Response Time: 2 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)
Bob Elsele Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Nick Farr Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Dustin Hawley Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
John Hinz Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)
John Hofbauer Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Rick Hull Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Doug Melton Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Home)
Eudis Mendoza Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Tim Mether Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile)
Damon Remus Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)

Snake River Terminal Personnel, Continued

* 24-hour number

SNAKE RIVER TERMINAL PERSONNEL, CONTINUED	
Snake River Terminal, Continued	
George Robinson Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Home)
Karen Scott Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home)
Billy Thomas Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) Home)
Caleb Thonney Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)
Tom Trutter Terminal Operator/Tankerman Response Time: 0.5 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home)

Other Tidewater Terminal Company Personnel

* 24-hour number

OTHER TIDEWATER TERMINAL COMPANY PERSONNEL	
Other Tidewater Terminal Company Personnel	
Dean Smith Leadman , Tidewater Terminal Company - Umatilla Terminal Disposal Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 0.5 (hours)	541-922-3251 (Office) (b) (6) (Mobile) Home) 541-561-6049 (Direct)
Matt Hofbauer Terminal Operator/Tankerman Response Time: 1 (hours)	541-922-3251 (Office) (b) (6) (Home)
Roy "Junior" Drago Leadman, Tidewater Terminal Company - Boardman Terminal Decon Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 0.5 (hours)	541-481-3625 (Office) (b) (6) (Mobile) 509-727-1768 (Direct)
Jay Sullivan Equipment Operator Response Time: 2 (hours)	541-481-3625 (Office) (b) (6) (Mobile)
Doug Nelson Equipment Operator Response Time: 2 (hours)	541-481-3625 (Office) (b) (6) (Home)
Danny Bond Equipment Operator Response Time: 2 (hours)	541-481-3625 (Office) (b) (6) (Home)
Perry Van Schoiak Journeyman Leadman, Tidewater Terminal Company - TIC Container Dock Response Time: 4 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-772-1840 (Other)
Terry Hariston Journeyman, Tidewater Terminal Company - TIC Container Dock Response Time: 4 (hours)	360-693-1491 (Office) (b) (6) (Mobile)
Brian Anderson Journeyman, Tidewater Terminal Company - TIC Container Dock Response Time: 4 (hours)	360-693-1491 (Office) (b) (6) (Mobile)

FIGURE 3.1-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

- Mandatory Notifications
- Notifications As Appropriate
- Oil Spill Removal Organizations (OSROs)

Mandatory Notifications

* 24-hour number

MANDATORY NOTIFICATIONS	
Mandatory Notifications	
National Response Center (NRC)	800-442-8802* (Office) (b) (6) * (Mobile)
Washington State Department of Emergency Management	800-258-5990 (Office)

Notifications As Appropriate

* 24-hour number

NOTIFICATIONS AS APPROPRIATE	
Federal	
U.S. Coast Guard - Sector Columbia River	503-861-2242 (Office)
U.S. Coast Guard - Sector Astoria	503-861-6211* (Office)
U.S. Coast Guard Aids to Navigation Team, Kennewick, WA	509-586 Ext. 1110 (Office)
Army Corps of Engineers	503-325-1135 (Astoria, OR) 541-922-3211 (Project Office, McNary Dam) 509-751-0240 (Clarkston, WA) 509-547-7781 (Admin, Pasco, WA) 503-808-5150 (Portland, OR) 541-980-1900 (Mobile, District Driving Coordinator)
EPA Region X	206-553-1263 (Office)
Department of Interior Environmental Affairs	503-231-6157 (Office)
Federal Bureau of Investigation Portland, OR	503-224-4181 (Office)
Fish and Wildlife Service Environmental Contaminants	360-753-5821 (Olympic, WA) 503-231-6223 (Portland, OR)
National Weather Service	208-743-3841 (Lewiston, ID) 541-276-0103 (Pendleton, OR) 503-261-9246 (Portland, OR)
NOAA Office of Response and Restoration	206-526-6317* (Office) 206-526-6329 (Office)
State	
WUTC (Emergency Notification Line)	888-321-9146* (Office)
Washington Department of Ecology	360-407-6300 (SW Region Office) 509-329-3400 (Eastern Region Office) 509-575-2490 (Central Region Office) Note: The correct Washington Department of Ecology regional office would be notified by the Washington State Department of Emergency Management (mandatory notification)

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
State, Continued	
Washington Highway Patrol (Emergencies Only)	360-757-1175* (Office)
Washington State Department of Agriculture	360-902-1800 (Office)
Washington State Department of Fish and Wildlife Oil Spill Response Team/Hydraulic Project Approval	360-534-8233 (Pager)
Washington State Department of Fish and Wildlife South Central Washington, Region 3 (Yakima), (Benton and Franklin Counties)	509-575-2740 (Office)
Washington State Department of Natural Resources (Regional)	360-856-3500 (Office) 888-226-7688
Washington Department of Parks and Recreation	360-755-9231 (Office)
Washington State Fire Marshal	360-596-3900 (Office)
Southwest Clean Air Agency	360-574-3058 (Office) 800-633-0709
CHEMTREC(R)	800-424-9300* (Office)
Idaho State Communication System	800-632-8000 (Office) 208-846-7610 (Office)
County/City Agencies	
Benton Emergency Management	509-628-2600 (Office)
Franklin Emergency Management	509-545-3546 (Office) (509) 545-3500 (After hours)
Benton County Sheriff	509-735-6555 (Office) 911*
Franklin County Sheriff	509-545-3501 (Office) 911*
Ambulance	
AAA Advanced Air Ambulance	800-633-3590 (Office)
AAAEMS - Accredited Air Ambulance Emergency	800-558-5387 (Office) Aircraft-charter & Ambulance service
Fire Departments	
Franklin County Fire District #3	509-547-9306 (Office) 911*
Pasco Fire Department	509-545-3426 (Office) 911*
Walla Walla County Fire District #5	509-547-8341 (Office) 911*
Hospitals/Medical Clinics	
Kadlec Medical	509-942-4611 (Office)
Kennewick General Hospital	509-586-6111 (Office)
Lourdes Health Network	509-547-7704 (Office)

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
Hospitals/Medical Clinics, Continued	
Lourdes Occupational Health Center	509-546-2222 (Office)
Local Emergency Planning Committees	
Franklin County, WA Emergency Mgmt, Attn: Sean Davis	509-545-3546 (Office)
Accommodations	
Comfort Inn	509-783-8396 (Office)
Red Lion Hotel (Pasco)	509-547-0701 (Office)
The Guest House Clearwater Inn	509-735-2242 (Office)
Clover Island Inn	509-586-0541 (Office)
Shilo Conference Hotel (Richland)	509-946-4661 (Office)
Aircraft – Charter, Rental	
Bergstrom Aircraft, Inc.	509-547-6271 (Office)
Roland Decoto Flying Service	509-762-1016 (Office)
Auto Rental/Cab Companies	
Enterprise Rent A Car	509-544-9404 (Office) 800) 736-8222
Hertz Rent A Car	509-547-0111 (Office)
A-1 Tri-Cities Cab	509-783-1234 (Office)
Catering	
Leo's Catering	509-582-6598 (Office)
O'Callahan's Restaurant & Catering at The Shilo Inn	509-946-9006 (Office)
Diving & Salvage	
Columbia Basin Dive Rescue	509-946-2237 (Office)
Under Sea Adventures, Inc.	509-735-0735 (Office)
Global Diving and Salvage, Inc.	206-623-0621 (Office)
Neil F. Lampson, Inc.	509-586-0411* (Office)
Electrical Contractors	
Essco Electric, Inc.	509-547-5504 (Office) (509) 547-5506 (Fax)
Raines Electric, Inc.	509-627-0400 (Office) (509) 627-3249 (Fax)
Environmental Consultants	
AMEC Earth & Environmental, Inc.	503-639-3400 (Office) 360-695-0254 (Office) Consulting engineers - environmental, geotechnical, soils

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
Environmental Consultants, Continued	
CH2M Hill	509-747-2000 (Office) 509-623-1622 (Fax) Consulting engineers
Columbia Environmental Sciences	509-783-5571 (Office)
Environmental Drilling	
Environmental West Explorations, Inc.	509-534-2740 (Office) 509-534-7444 (Fax) Environmental and ecological services, Drilling and boring
Boart & Longyear	503-692-6400 (Office) Drilling and boring contractors, Well drilling and service
Equipment Rental	
Hertz Equipment Rental	509-586-0551 (Office) Contractors' equipment
Sunbelt Rentals	509-547-8565 (Office) Contractors' equipment, Forklifts, Scaffolding and aerial
Pasco Rentals	509-547-1727 (Office) Cement-retail, Concrete-ready mixed, Gas-propane, Sand & gra
Star Rental and Sales	509-545-8521 (Office) Concrete construction forms and accessories, Contractorsâ€™
Environmental Supply	
Siemens	360-699-7392 (Office) 360-695-0358 (Fax) Carbon-activated, Thermal oxidation equipment

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
Environmental Supply, Continued	
Blue Ribbon Environmental Products	509-489-1704 (Office) Environmental equipment and products
Excavation	
Ray Poland & Sons, Inc.	509-586-2158 (Office) (509) 582-6912 (Fax) Building contractors
3 Kings Environmental	509-374-0162 (Office) Excavating contractors, Tanks-removal
Cox Excavating, Inc.	509-547-6527 (Office) Excavating contractors, Rock/Sand and gravel/topsoil, Truc
Connell Sand & Gravel	509-234-3221 (Office)
Food Services/Restaurants	
Cedars Restaurant	509-582-2143 (Office)
Shari's Restaurant	509-735-7438 (Office)
Andy's Coffee Break Restaurant	509-547-7886 (Office)
Zip's Hamburgers & Fish	509-783-7448 (Office)
Naval Architect / Marine Engineering Services	
Glosten Associates	206-624-7850 (Office)
Elliot Bay Design Group	206-782-3082 (Office)
Media	
KONA Radio	509-547-1618 (Office)
KEPR Television	509-547-0547 (Office) (509) 547-2845 (Fax)
KNDU Television	509-737-6725 (Office) (509) 783-3746 (Fax) (509) 783-6153 (After hours)

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
Media, Continued	
KVEW Television	509-735-8369 (Office) (509) 735-8369 (Fax) (509) 735-8372 (After hours)
Municipal City Hall	
Pasco	509-545-3400 (Office)
Response Resource Subcontractors	
Global Environmental	206-623-0621 (Office) Divers, Spill ctrl svcs, equipment/supplies, Tanks-removal
NRC Environmental Services	800-337-7455 (Office) Hazardous waste disposal, Spill control service
Thermo Fluids, Inc.	800-350-7565 (Office) 503-788-4612 (Redmond, OR) 253-863-3310 (Seattle, WA) Waste oil/water, tank cleaning/removal, ind. vac cleaning, haz waste disposal
Cowlitz Clean Sweep	360-423-6316 (Office) Spill ctrl svcs, equipment/supplies, industrial vac cleaning
Spill Management Services	
Manager Consulting and Response Services, O'Brien's	206-679-3658 (Office)
Technical Response Planning Corp.	281-955-9600 (Office)
TRG	281-880-5000 (Office)
Tank Supply Companies	
Baker Tanks	503-775-7211 (Office) (800) 283-5170
Waste Oil Handlers	

Notifications As Appropriate, Continued

* 24-hour number

NOTIFICATIONS AS APPROPRIATE, CONTINUED	
Waste Oil Handlers, Continued	
Oil Re-Refining Co.	800-367-8894 (Office) 509-928-4008 (Spokane) 503-286-8352 (Portland) Oils-re-refined, Oils-waste
Dams	
Windust Park Administrative Office	509-547-7781 Ext. 231 (Office)
River Access	
Windust Park Administrative Office	509-547-7781 Ext. 231 (Office)
Sacajawea State Park	509-545-2361 (Office)
Area Water Supplies	
Water District	509-545-3489 (Office) (509) 545-2737

Oil Spill Removal Organizations (OSROs)

OIL SPILL REMOVAL ORGANIZATIONS (OSROS)	
CLASSIFIED OSRO's	
National Response Corporation (NRC) Response Time: 2 (hours) **Office Address:** 720 North California Street Suite E Pasco, WA 99301 United States	800-899-4672 (Office)
Clean Rivers Cooperative Response Time: 6 (hours) **Office Address:** 200 SW Market, Suite 190 Portland, OR 97201 United States	503-220-2040* (Office)
NON-CLASSIFIED OSRO's	
Tidewater Barge Lines Response Time: 1 - 6.5 (hours) **Office Address:** P.O. Box 1210, 6305 NW Old Lower River Road Vancouver, WA 98660 United States	503-289-4274* (Office)
Resolve Salvage & Fire (Americas), Inc. Response Time: 12 (hours) **Office Address:** 1850 SE 17th St., Suite 204 Fort Lauderdale, FL 33316 United States	954-764-8700* (Office)
International Bird Rescue Response Time: 9 (hours) **Office Address:** 1526 Franklin Avenue Astoria, OR 97103 United States	888-447-1743* (Office)

FIGURE 3.1-5 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	REPORTING REQUIREMENT
National Response Center (NRC)	Any spill of 50 barrels or more on land. Any spill to a navigable waterway that causes a sheen. The NRC must be immediately notified of any oil discharge or release of a hazardous substance in an amount equal to or greater than the reportable quantity. Notification via telephone is required within two hours for any failure in a pipeline that: - Resulted in the release of five barrels of oil - 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 the 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. Reports must include the following: - Name and address of the operator - Name and telephone number of report - Location of the failure - Time of the failure - Fatalities and personal injuries, if any - All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages
LEPC	Report any release that endangers the public's health or welfare through traffic hazard, explosion, fire, noxious gas, or off-site exposure. Due to safety concerns, report incident to the LEPC (or fire/police departments) before contacting other agencies.
Washington Emergency Management Division (EMD)	Within one hour: - All spills of oil into state waters or the environment - Any "vessel emergency" which means a substantial threat of pollution originating from a covered vessel including loss or serious degradation of: - Propulsion - Steering - Means of navigation - Primary electrical generating capability - Seakeeping capability Report shall include: - Names of reporting party and company - Contact phone number(s) - Material, quantity, concentration, and location of spill - Cleanup status - Responsible party - Ship location and proximity to land or other navigational hazards - Weather - Currents - Traffic density - Severity and nature of damage to vessel - Timing or likelihood of vessel repairs

FIGURE 3.1-5 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	REPORTING REQUIREMENT
Washington Department of Ecology	The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, he must submit a written report on the incident to the department. The report must include: (i) Name, address, and telephone number of the owner or operator; (ii) Name, address, and telephone number of the facility; (iii) Date, time, and type of incident (e.g., fire, explosion); (iv) Name and quantity of material(s) involved; (v) The extent of injuries, if any; (vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; (vii) Estimated quantity and disposition of recovered material that resulted from the incident; (viii) Cause of incident; and (ix) Description of corrective action taken to prevent reoccurrence of the incident

3.2 Notification Requirements for Spill to Ground

NOTIFICATION REQUIREMENTS FOR SPILL TO GROUND			
Spills to Ground and Permeable Secondary Containment that Threaten Waters of the State (Surface or Ground Water)			
Spills to ground and to permeable secondary containment that threaten or impact waters of the state (surface water and groundwater) shall be reported to the Washington Emergency Management Division (WEMD) and the Ecology Regional Office (Ecology) using the contact information in FIGURE 3.1-4.			
All spills to ground and permeable secondary containment are considered reportable except for;			
• Spills which are known to be less than 42 gallons that do not impact surface water or ground water, • Releases managed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) Section or Superfund, • On-facility air releases to the atmosphere only, • Releases from underground storage tanks regulated under Washington Administrative Code (WAC) 173-360, • Preexisting sources of release identified as Resource Conservation and Recovery Act of 1976 (RCRA) solid waste management units, and • Spills contained within areas controlled by National Pollutant Discharge Elimination System			
All spills to ground or permeable secondary containment exceeding 42 gallons shall be reported, as should spills on unknown quantity or if the release is ongoing or uncontrolled. A spill is not considered to have affected the ground if the spill occurs on pavement such as asphalt or concrete. A spill to soil or gravel is considered to have affected the ground and is reportable if, based on best professional judgment, the spill has potential to impact waters of the state or otherwise pose a threat, or potential threat, to human health and the environment. Potential and follow up actions regarding reporting of spills to ground and permeable secondary containment are described below.			
YES	**NO**	**POTENTIAL TRIGGERS**	**ACTION**
		The spill volume is less than 42 gallons, and based on best professional judgment, does not have potential to reach surface water or groundwater or otherwise pose a threat, or potential threat, to human health and the environment	If yes, no external notifications are necessary
		The spill volume exceeds 42 gallons	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		The volume of the spill is unknown or uncertain, but potentially exceeds 42 gallons	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		The volume of the spill is less than 42 gallons and does not threaten surface water or ground water	If yes, no external notifications are necessary
		The spill is uncontained	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.

3.2 Notification Requirements for Spill to Ground

NOTIFICATION REQUIREMENTS FOR SPILL TO GROUND, CONTINUED			
Spills to Ground and Permeable Secondary Containment that Threaten Waters of the State (Surface or Ground Water), Continued			
YES	**NO**	**POTENTIAL TRIGGERS**	**ACTION**
		The spill is located in an area where there is a pathway to surface water, and environmental conditions, such as rain events, make an impact to surface water or groundwater likely	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		The spill is located in an area where there is a pathway to groundwater, and environmental conditions, such as shallow depth to groundwater and permeable soil type, make an impact to groundwater likely	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		As a result of the spill, response actions have been taken to isolate the area from vehicle traffic, equipment traffic, or human contact	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.	If yes, an internal investigation of practices or equipment would be initiated
		The spill occurs inside and is contained within impermeable secondary containment	If yes, no external notifications are necessary
		The volume spill is less than 42 gallons and affected soil can effectively be removed so that surface water and groundwater are not likely to be affected	If yes, no external notifications are necessary
		The spill occurs in an area controlled under a NPDES permit, but because of environmental conditions, such as shallow depth to ground water or permeable soil type, make an impact to groundwater likely	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.
		You are not sure the release should be reported	If yes, follow Emergency Response Actions in FIGURE 2-1 and notify NRC, WEMD, and Ecology using contact information in FIGURE 3.1-4.

SECTION 4
RESPONSE TEAM ORGANIZATION

Last revised: 09/01/2008

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4.1 Incident Command Team (ICT) Description

4.2 Activation Procedures

4.3 Team Member Response Times

4.4 Unified Command System

4.5 Qualified Individual (QI)

4.6 Incident Command Planning Process

Figure 4.6-1 - Incident Command Team (ICT) Activation Procedure

Figure 4.6-2 - Incident Command Team (ICT) Organization Chart

Figure 4.6-3 - Incident Command Team (ICT) Personnel Roster

4.7 Incident Command Team (ICT) Job Description

4.8 Transitioning of Initial Response

Figure 4.8-1 - Transition Checklist

4.9 Shift Change

Figure 4.9-1 - Shift Change Checklist

4.1 INCIDENT COMMAND TEAM (ICT) DESCRIPTION

The Company has adopted the National Incident Management System (NIMS) Incident Command System (ICS), which provides the structure for effective management of spill resources. The ICS would be activated and mobilized in accordance with the size and complexity of the incident. An Incident Command Team (ICT) organization chart is provided in **FIGURE 4.6-1.** Members of the ICT are listed in **FIGURE 4.6-3.** Job descriptions for each ICT member are provided in **SECTION 4.6.** The ICT will train by participating in exercises as noted in **APPENDIX A.**

4.2 ACTIVATION PROCEDURES

Activation of the ICT may be accomplished in stages as illustrated in **FIGURE 4.6-1** and described below:

- First Responder discovers the spill and notifies the Person-in-Charge (PIC).
- PIC assumes Initial Response Team Manager (IRTM) and notifies the Qualified Individual (QI); QI and IRTM determine whether to activate ICT.
- QI goes to Command Post and assumes the Incident Commander (IC) role.
- IC notifies the ICT Section Chiefs and Command Staff.
- Section Chiefs and Command Staff notify necessary personnel.
- IC briefs ICT upon arrival at Command Post.
- IC and Section Chiefs continually assess staffing needs.
- IC activates additional ICT personnel (if needed).
- IC de-activates ICT personnel that are not needed.

4.3 TEAM MEMBER RESPONSE TIMES

The Incident Commander and ICT will mobilize to the Command Post initially. The ICT's maximum expected arrival time in hours is one to six hours depending on the location of the incident. An initial Command Post may be established on any Company vessel or at any Company shoreside facility (see **FIGURE 1-3**).

4.4 UNIFIED COMMAND SYSTEM

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

- Federal On-Scene Coordinator (FOSC)
- State On-Scene Coordinator (SOSC)
- Company Incident Commander (IC)
- Local and/or Tribal On-Scene Coordinator

These people share decision-making authority within the Incident Command System. Each is responsible for coordinating other federal, state, and company personnel so all work together to:

- Mobilize, implement, and manage the UCS organization structure needed to anticipate and proactively accomplish response requirements.
- Assess incident priorities.
- Determine strategic goals and tactical objectives.
- Approve the Incident Action Plan (IAP) and ensure each organization implements and accomplishes those actions for which they are responsible.
- Approve access to the Oil Spill Liability Trust Fund (OSLTF) and/or the Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA) fund (if applicable).
- Set response funding ceilings.
- Anticipate response needs and authorize the ordering, deploying, and demobilization of the Company's, contractor's, and government's response resources.
- Serve as the ultimate safety authority, approve the Site Safety and Health Plan, and ensure the maximum achievable level of worker health and safety for all responders Authorize information releases to the media and participate in scheduled press conferences.
- Monitor organizational adequacy, span of control, and information exchange.

4.5 QUALIFIED INDIVIDUAL (QI)

The QI has the following responsibilities and authorities:

- Activate internal alarms and hazard communication systems to notify all appropriate personnel.
- Notify all response personnel as needed.
- Identify character, exact source, amount, and extent of the release along with 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.
- Coordinate rescue and response actions.
- Assess and implement prompt removal actions.
- Access company funds to initiate clean-up activities.
- Direct clean-up activities until properly relieved of this responsibility or the incident is terminated.

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.

4.6 INCIDENT COMMAND PLANNING PROCESS

The incident planning process will follow the practices as outlined in the latest edition of the Northwest Area Contingency Plan (NWACP). The Company also recognizes and acknowledges NWACP policies for Liaison, Environmental Unit and Wildlife Director staffing.

FIGURE 4.6-1 - INCIDENT COMMAND TEAM (ICT) ACTIVATION PROCEDURE

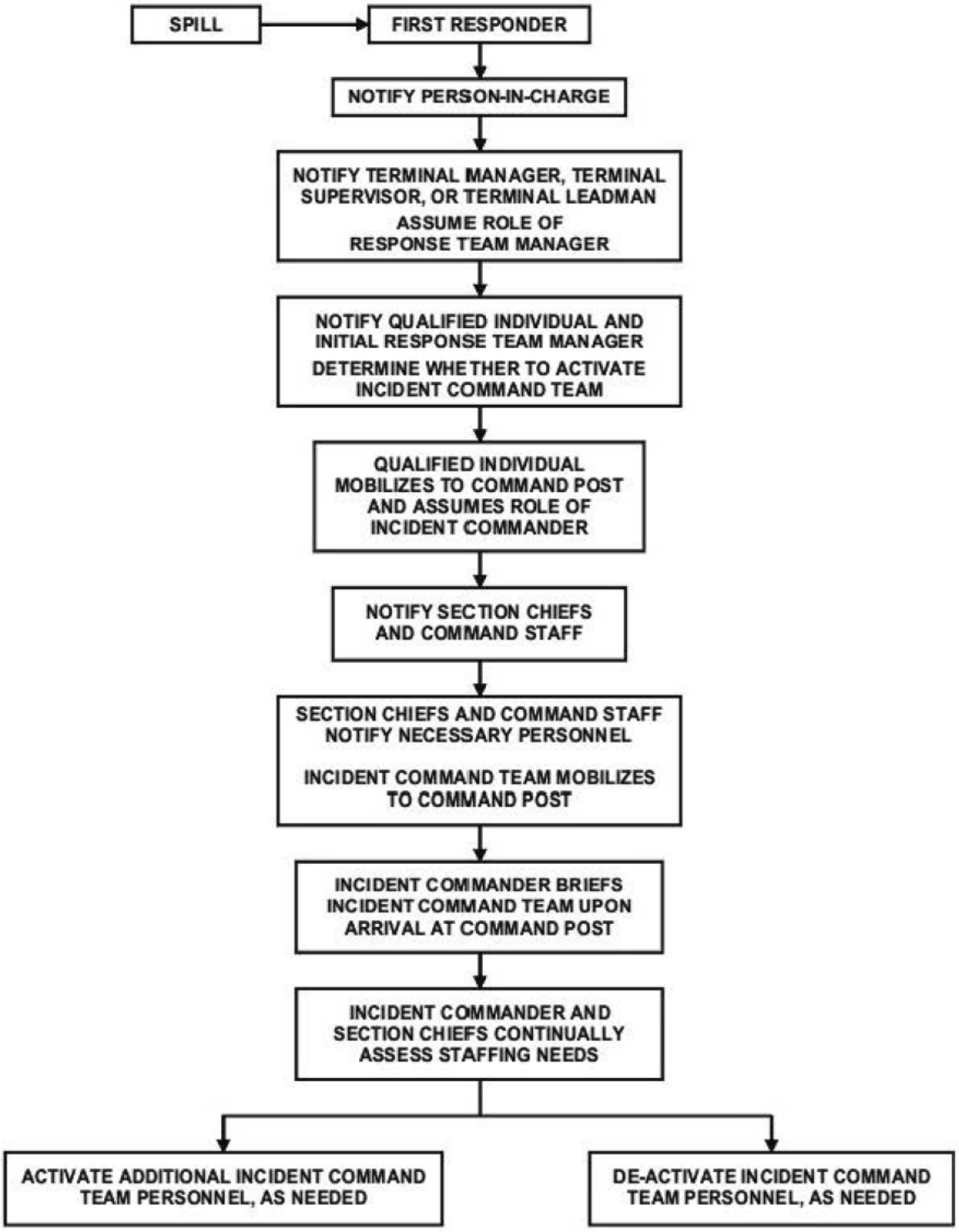

FIGURE 4.6-2 - INCIDENT COMMAND TEAM (ICT) ORGANIZATION CHART

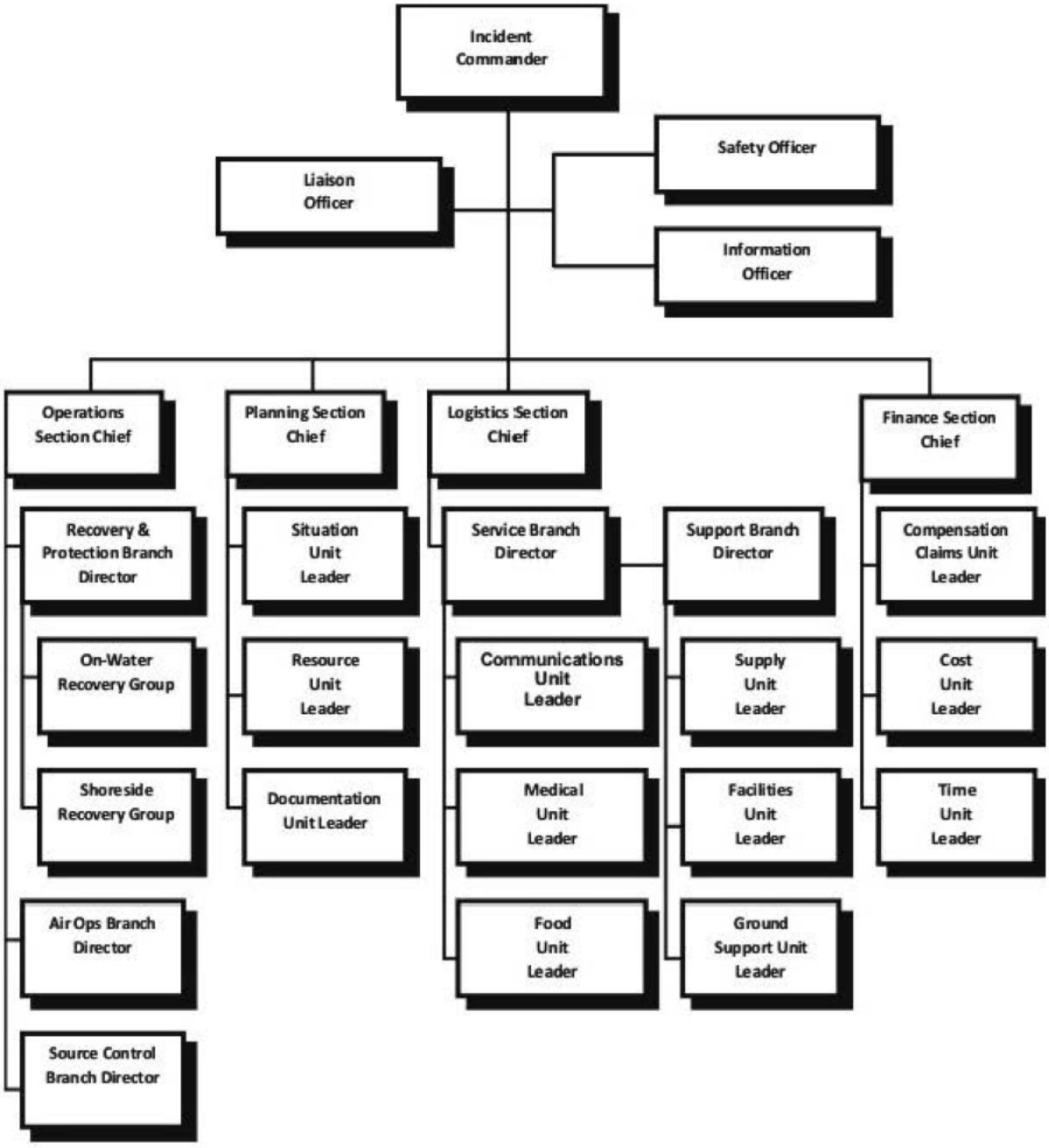

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER	
Incident Commander	
Bruce Reed Vice President/Chief Operations Officer, Tidewater Barge Lines Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0341 (Direct)
Andy Stephens Vice President/Business Development , Tidewater Terminal Company Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0327 (Direct)
Public Information Officer	
Carol Bua Public Affairs Manager Public Information Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0310 (Direct)
Greg Zanavich Business Development Manager - Grain/Special Projects Public Information Officer, Situation Unit Leader Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0323 (Direct)
Liaison Officer	
Carol Bua Public Affairs Manager Public Information Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0310 (Direct)
Marco Ullmer Business Development Manager - Liquids Liaison Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0326 (Direct)
Brian Rankin Quality Manager Liason Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0338 (Direct)
Safety Officer	
Kelly Kilgore EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Safety Officer, Continued	
Gary Stonewall EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-619-7175 (Direct)
Joshua Jarman EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2213 (Direct)
Operations Section	
Craig Nelson Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0311 (Direct)
Marc Schwartz Port Engineer, Tidewater Barge Lines Qualified Individual Operations Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0336 (Direct)
Roy Self Maintenance Supervisor, Tidewater Barge Lines Recovery & Protection Branch Director Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-616-1760 (Direct)
Ron McClary Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2211 (Direct) Alternate Emergency Coordinator
Mike Kurth Maintenance Supervisor , Tidewater Barge Lines Recovery & Protection Branch Director Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0319 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Operations Section, Continued	
Mark Davis Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) 509-544-2215 (Direct) Primary Emergency Coordinator
Stuart Baird Barge 50 Leadman/Dock Master, Tidewater Barge Lines Protection Group Supervisor, Disposal Group Supervisor Response Time: 3 (hours)	503-693-1491 (Office) (b) (6) (Mobile) (Home) 360-619-7170 (Direct)
Brian Fletcher Port Captain, Tidewater Barge Lines On-Water Recovery Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)
Kelly Kilgore EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)
Roger Kentch Barge Chaser, Tidewater Barge Lines On-Water Recovery Group Supervisor, Salvage/Source Control Group Supervisor Response Time: 2 (hours)	509-547-7701 (Office) (b) (6) Mobile) Home)
Josh Burrows Assistant Port Captain, Tidewater Barge Lines On-Water Recovery Group Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) Mobile) 360-759-0354 (Direct) (b) (6) (Personal Mobile)
Josh Nichols Assistant Port Captain, Tidewater Barge Lines On-Water Recovery Group Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-693-1491 (Direct) (b) (6) (Personal Mobile)
Kelly Harding Leadman/Tankerman , Tidewater Terminal Company - Snake River Terminal Shoreside Recovery Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home)
Jerry Mezzanato Barge 30 Supervisor - Maintenance Leadman Disposal Group Supervisor Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Operations Section, Continued	
Dean Smith Leadman , Tidewater Terminal Company - Umatilla Terminal Disposal Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 0.5 (hours)	541-922-3251 (Office) (b) (6) (Mobile) Home) 541-561-6049 (Direct)
Gary Stonewall EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-619-7175 (Direct)
Roy "Junior" Drago Leadman, Tidewater Terminal Company - Boardman Terminal Decon Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 0.5 (hours)	541-481-3625 (Office) (b) (6) (Mobile) 509-727-1768 (Direct)
Tim Berry Maintenance Leadman , Tidewater Terminal Company - Snake River Terminal Salvage/Source Control Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2214 (Direct)
Brent Mattix Barge 50 Supervisor, Tidewater Barge Lines Salvage/Source Control Group Supervisor Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home)
Dale Wilson Lead Tankerman , Tidewater Barge Lines Salvage/Source Control Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile)
Ham Howard Dispatcher, Tidewater Barge Lines Air Operations Branch Director, Vessel Support Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0302 (Direct)
David Babcock Dispatcher, Tidewater Barge Lines Air Operations Branch Director Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile)
Johanna Wills Purchasing Manager, Tidewater Barge Lines Staging Area Manager, Resources Unit Leader, Support Branch Director Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-619-7166 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Operations Section, Continued	
Mark Fitzhugh Terminals Coordinator, Tidewater Terminal Company Staging Area Manager, Facilities Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2212 (Direct)
Planning Section	
Bill Collins Director EHS&S Qualified Individual Planning Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0306 (Direct)
Geoff Doerfler Dispatch Manager Planning Section Chief, Logistics Section Chief Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0301 (Direct)
David Konz Claims Manager, Tidewater Barge Lines, Inc. Situation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0307 (Direct) P&I Club: West of England, Local Correspondent: Law Office of Schwabe Williamson & Wyatt
Greg Zanavich Business Development Manager - Grain/Special Projects Public Information Officer, Situation Unit Leader Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0323 (Direct)
Brian Rankin Quality Manager Liason Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0338 (Direct)
Johanna Wills Purchasing Manager, Tidewater Barge Lines Staging Area Manager, Resources Unit Leader, Support Branch Director Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-619-7166 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Planning Section , Continued	
Tina Roswell Terminal Support Services Mgr, Tidewater Terminal Company Resources Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2204 (Direct)
Kathie Nunn Executive Administrative Assistant Documentation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0335 (Direct)
Kaylee Brown Human Resources Generalist Documentation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0316 (Direct)
Mike McClellan Barge 30 Maintenance Leadman Demobilization Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home)
Joshua Jarman EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2213 (Direct)
Stephanie Syring Environmental Manager Environmental Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0305 (Direct)
Logistics Section	
Geoff Doerfler Dispatch Manager Planning Section Chief, Logistics Section Chief Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0301 (Direct)
David Konz Claims Manager, Tidewater Barge Lines, Inc. Situation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0307 (Direct) P&I Club: West of England, Local Correspondent: Law Office of Schwabe Williamson & Wyatt

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Logistics Section , Continued	
Julie DeBoever Human Resources Manager Service Branch Director Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0315 (Direct)
Steve Harman Information Technology Specialist Communications Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0335 (Direct)
Tim Colton ERP Specialist Communications Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	(b) (6) Mobile)
Stan Smith Information Technology Manager Communications Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0334 (Direct)
Sherry Duffy Support Specialist Medical Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0304 (Direct)
Maria Guy EHS&S Administrative Assistant Food Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0333 (Direct)
Suzanne Nichols Maintenance Coordinator Food Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0337 (Direct)
Craig Nelson Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0311 (Direct)
Johanna Wills Purchasing Manager, Tidewater Barge Lines Staging Area Manager, Resources Unit Leader, Support Branch Director Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) Mobile) Home) 360-619-7166 (Direct)
Alex Augustus Purchsing, Buyer Supply Unit Leader, Ground Support Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0317 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Logistics Section , Continued	
Kevin Cote Purchasing, Buyer Supply Unit Leader, Ground Support Unit Leader Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-619-7167 (Direct)
Kelly Harding Leadman/Tankerman , Tidewater Terminal Company - Snake River Terminal Shoreside Recovery Group Supervisor Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home)
Mark Fitzhugh Terminals Coordinator, Tidewater Terminal Company Staging Area Manager, Facilities Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) (Home) 509-544-2212 (Direct)
Ham Howard Dispatcher, Tidewater Barge Lines Air Operations Branch Director, Vessel Support Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0302 (Direct)
Finance Section	
Kelly Larson Controller Finance Section Chief, Cost Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-0348 (Office) (b) (6) (Mobile) 360-759-0348
Myron Reising Chief Financial Officer Finance Section Chief Response Time: 3 (hours)	360-759-0353 (Office) (b) (6) * (Mobile) 360-759-0353
Krista Prakken-Thompson Staff Accountant Cost Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) (Mobile) 360-759-0349 (Direct)
Christine Deaton Senior Treasury Analyst Cost Unit Leader Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) (Mobile) 360-759-0344 (Direct)
Laura Birdwell Benefits & Compensation Manager Compensation Claims Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) (Mobile) (Home) 360-759-0312 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Finance Section , Continued	
Christine Coiteaux Clerk, Accounts Payable Compensation Claims Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) * (Mobile) 360-759-0342 (Direct)
Lisa Taylor Crewing Coordinator Time Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) (Mobile) Home) 360-759-0331 (Direct)
Lisa Swartz Clerk, Accounts Receivable Time Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) * (Mobile) Home) 360-759-0343 (Direct)
Darcie Johnson Receptionist Procurement Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) (Mobile)
Laura Leggett Payroll Administrator Procurement Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-691-1493 (Office) (b) (6) Mobile) 360-759-0345 (Direct)
Qualified Individual	
Bob Curcio President/Chief Executive Officer Qualified Individual Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0322 (Direct)
Bruce Reed Vice President/Chief Operations Officer, Tidewater Barge Lines Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) Mobile) Home) 360-759-0341 (Direct)
Andy Stephens Vice President/Business Development , Tidewater Terminal Company Qualified Individual Incident Commander Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) (Home) 360-759-0327 (Direct)
Bill Collins Director EHS&S Qualified Individual Planning Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) Home) 360-759-0306 (Direct)

FIGURE 4.6-3 - INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER

* 24-hour number

FIGURE 4.6-3 INCIDENT COMMAND TEAM (ICT) PERSONNEL ROSTER, CONTINUED	
Qualified Individual, Continued	
Craig Nelson Operations Manager, Tidewater Barge Lines Qualified Individual Operations Section Chief, Support Branch Director, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) * (Mobile) 360-759-0311 (Direct)
Marc Schwartz Port Engineer, Tidewater Barge Lines Qualified Individual Operations Section Chief, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0336 (Direct)
Mark Davis Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) 509-544-2215 (Direct) Primary Emergency Coordinator
Ron McClary Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2211 (Direct) Alternate Emergency Coordinator
Security FSO - SRT	
Joshua Jarman EHS&S Specialist Safety Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2213 (Direct)
Mark Davis Operations Supervisor , Tidewater Terminal Company Qualified Individual Protection Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) * (Mobile) 509-544-2215 (Direct) Primary Emergency Coordinator
Ron McClary Maintenance Supervisor , Tidewater Terminal Company Qualified Individual Recovery & Protection Branch Director, On-Water Recovery Group Supervisor, Facility Security Officer Response Training: FEMA 100b, FEMA 200b Response Time: 1 (hours)	509-547-7701 (Office) (b) (6) (Mobile) Home) 509-544-2211 (Direct) Alternate Emergency Coordinator

4.7 INCIDENT COMMAND TEAM (ICT) JOB DESCRIPTION

The job descriptions for the following positions can be found in the latest edition of the Northwest Area Contingency Plan (NWACP). The jobs descriptions are intended to be used as a tool to assist ICT members in their particular positions within the Incident Command System (ICS).

- Incident Commander
- Information Officer
- Safety Officer
- Liaison Officer
- Agency Representatives
- NRDA Representative
- Operations Section Chief
- Staging Area Manager
- Branch Director
- Division/Group Supervisor
- Strike Team/Task Force Leader
- Single Resource
- Air Operations Branch Director
- Air Tactical Group Supervisor
- Helicopter Coordinator
- Fixed-Wing Coordinator
- Air Support Group Supervisor
- Helibase Manager
- Recovery and Protection Branch Director
- Protection Group Supervisor
- On Water Recovery Group Supervisor
- Shoreside Recovery Group Supervisor
- Disposal Group Supervisor
- Decontamination Group Supervisor
- Emergency Response Branch Director
- Search and Rescue (SAR) Group Supervisor
- Salvage Group Supervisor
- Fire Suppression Group Supervisor
- Hazardous Materials Group Supervisor
- Medical Group (EMS) Supervisor
- Law Enforcement Group Supervisor
- Wildlife Branch Director
- Wildlife Recovery Group Supervisor
- Wildlife Rehabilitation Center
- Planning Section Chief
- Situation Unit Leader
- Display Processor
- Field Observer

4.7 INCIDENT COMMAND TEAM (ICT) JOB DESCRIPTION, CONTINUED

- Trajectory Analysis Specialist
- Geographic Information System (GIS) Specialist
- Resources at Risk (RAR) Technical Specialist
- Resources Unit Leader
- Check-In Recorder
- Volunteer Coordinator
- Documentation Unit Leader
- Demobilization Unit Leader
- Technical Specialists
- Legal Specialist
- Scientific Support Coordinator Specialist (SSC)
- Sampling Specialist
- Disposal (Waste Management) Specialist
- Alternative Response Technologies (ART) Specialist
- Logistics Section Chief
- Service Branch Director
- Communications Unit Leader
- Medical Unit Leader
- Food Unit Leader
- Support Branch Director
- Supply Unit Leader
- Ordering Manager
- Receiving and Distribution Manager
- Facilities Unit Leader
- Security Manager
- Ground Support Unit Leader
- Vessel Support Unit Leader
- Finance/Administration Section Chief
- Time Unit Leader
- Equipment Time Recorder
- Personnel Time Recorder
- Procurement Unit Leader
- Compensation/Claims Unit Leader
- Cost Unit Leader

4.7 INCIDENT COMMAND TEAM (ICT) JOB DESCRIPTION, CONTINUED

The following are responsibilities applicable to all ICS personnel:

COMMON RESPONSIBILITIES
Receive assignment, notification, reporting location, reporting time, and travel instructions from your home agency.
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)
Agency representatives from assisting or cooperating agencies report to Liaison Officer at Command Post after checking in.
All radio communications to Incident Communications Center will be addressed: "(Incident Name) Communications."
Use clear text and ICS terminology (no codes) in all radio transmissions.
Receive briefing from immediate supervisor.
Acquire work materials.
Organize, assign, and brief subordinates.
Complete forms and reports required of the assigned position and send material through supervisor to Documentation Unit.
Respond to demobilization orders.
Brief subordinates regarding demobilization.
Maintain Unit Log and Individual Log (ICS 214a-OS and 214b-OS, **SECTION 5.4**).

4.8 TRANSITIONING OF INITIAL RESPONSE

Once the decision has been made to transition from initial response team to the incoming team, the following guidelines are to assist in the transition:

General Guidelines:

1. Current operational Management Team in place remains in charge until there has been a briefing with the incoming team.
2. Logistics will specify times of arrival and transfer of command and discuss the time frames with the incoming Incident Commander
3. The incoming team should have ample time to phase-in to the operations with the outgoing team before being released.
4. Clear lines of authority must be established quickly in order to minimize confusion and maintain operational control.
5. Formal transfers should occur if possible at the beginning or end of operational period.
6. Current Logistics Leader should see that the following actions are accomplished prior to the arrival of the incoming team:
    a. Determine Incident Command Post.
    b. Order basic support equipment and supplies for the incident.
    c. Secure and ample supply of appropriate maps and GIS support.
    d. Secure adequate transportation for outgoing and incoming team.
    e. Obtain necessary communication equipment.

FIGURE 4.8-1 - TRANSITION CHECKLIST

GENERAL TRANSITION CHECKLIST
☐ Receive job assignment.
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review Job Responsibilities as defined in the Field Operations Guide.
☐ Receive brief overview of type and magnitude of incident.
☐ Receive any special communication instructions (e.g., travel, radio frequency).
☐ Upon arrival at the incident, check in at designated check-in locations.
☐ Acquire work materials.
☐ Participate in meeting and briefings as appropriate.
☐ Ensure compliance with all safety practices. Report unsafe conditions to Safety Officer.
☐ Organize and brief subordinates.
☐ Complete forms and reports required for the assigned position. Ensure proper disposition documentation as directed.
☐ Ensure all equipment is operational prior to each work period.

4.9 SHIFT CHANGE

The following checklists should be used when an incident goes for long periods of time (i.e. more than 12 hours) and changes in staffing need to be made. The checklists are for the following positions:

- Incident Commander
- Safety Officer
- Public Information Officer
- Liaison Officer
- Operations Section Chief
- Finance Section Chief
- Logistics Section Chief
- Planning Section Chief

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST

Shift Change Checklist for Incident Commander
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain a briefing from prior Incident Command.
☐ Review Incident Status Summary (209 OS).
☐ Establish the immediate priorities.
☐ Ensure planning meetings are scheduled as required.
☐ Ensure that adequate safety measures are in place.
☐ Coordinate with key people and officials.
☐ Approve requests for additional resources or for the release of resources.
☐ Keep agency administrator informed of incident status.
☐ Ensure Incident Status Summary (209-OS) is updated as necessary.
☐ Maintain and update Unit Log (214-OS).

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Safety Officer
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain a briefing from prior Safety Officer.
☐ Review Incident Status Summary (209 OS).
☐ Review Health and Safety Plan.
☐ Identify hazardous situations associated with the incident.
☐ Assign assistants as needed.
☐ Ensure the Health and Safety Plan is current. Revise as necessary.
☐ Brief Command on safety issues and concerns.
☐ Maintain Individual Log (ICS 214).

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for PIO
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain a briefing from prior PIO.
☐ Review Incident Status Summary (209 OS).
☐ Review previous media briefings.
☐ Attend and participate in meetings as appropriate or required.
☐ Obtain media information that may be useful to incident planning.
☐ Brief Command on PIO issues and concerns.
☐ Maintain Individual Log (ICS 214).

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Liaison
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain briefing from on duty Liaison Officer.
☐ Review Incident Status Summary (209 OS).
☐ Review list of assisting and cooperating agencies and Agency Representatives.
☐ Evaluate incident operations to identify current or potential inter-organization problems.
☐ Brief Command on agency issues and concerns.
☐ Maintain Individual Log (ICS 214).

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Operations Section Chief
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain briefing from on duty Operations Section Chief.
☐ Review Incident Status Summary (209 OS).
☐ Review current Operational Incident Objectives.
☐ Ensure out-going Unit Leaders brief their in-coming counterpart.
☐ Maintain Unit or Individual Log.

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Finance Section Chief
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain briefing from on duty Financial Section Chief.
☐ Review Incident Status Summary (209 OS).
☐ Review operational plans and provide alternatives where financially appropriate.
☐ Review current procedures that are established to address any claim arising form the incident.
☐ Ensure out-going Unit Leaders brief their in-coming counterpart.
☐ Maintain Unit or Individual Log.

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Logistics Section Chief
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain briefing from on duty Logistics Section Chief.
☐ Review Incident Status Summary (209 OS).
☐ Review the organization of the Logistics Section.
☐ Review proposed tactics for current operational period.
☐ Identify resource needs for incident contingencies.
☐ Ensure out-going Unit Leaders brief their in-coming counterpart.
☐ Maintain Unit or Individual Log.

FIGURE 4.9-1 - SHIFT CHANGE CHECKLIST, CONTINUED

Shift Change Checklist for Planning Section Chief
☐ Review Common Responsibilities as defined in the Field Operations Guide.
☐ Review position responsibilities as defined in the Field Operations Guide.
☐ Obtain briefing from on duty Planning Section Chief.
☐ Review Incident Status Summary (209 OS).
☐ Review documentation protocols.
☐ Evaluate current Operational Incident Objectives, Strategies and Tactics.
☐ Ensure out-going Unit Leaders brief their in-coming counterparts.
☐ Maintain Unit or Individual Log.

SECTION 5
INCIDENT PLANNING

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5.1 Documentation Procedures

5.2 Status Boards and General Forms (Non-ICS)

Figure 5.2-1 - Chronology of Events Log

Figure 5.2-2 - Response Equipment Status Board

Figure 5.2-3 - Response Personnel Status Board

Figure 5.2-4 - Disposition of Released Material

Figure 5.2-5 - Weather Conditions Log

Figure 5.2-6 - Procurement Request Form

Figure 5.2-7 - Incident Expenditures Log

Figure 5.2-8 - Health and Safety Message Log

5.3 Incident Action Plan Process and Meetings

Figure 5.3-1 - Operational Period Planning Cycle

5.3.1 Incident Occurs / Notifications

5.3.2 Initial Response and Assessment

5.3.3 Unified Command Objectives Meeting

5.3.4 Tactics Meeting

5.3.5 Planning Meeting

5.3.6 Incident Action Plan (IAP) Preparation and Approval

5.3.7 Operations Briefing

5.3.8 Assess Progress

SECTION 5
INCIDENT PLANNING, CONTINUED

5.3.9 Initial Unified Command Meeting

5.3.10 Command Staff Meeting

5.3.11 Command and General Staff Breakfast / Supper

5.3.12 Business Management Meeting

5.3.13 Agency Representative Meeting

5.3.14 News Briefing

5.4 ICS Forms

5.4.1 Incident Action Plan (IAP) Cover Sheet

5.4.2 General Plan

5.4.3 Incident Briefing ICS 201-OS

5.4.4 Incident Objectives ICS 202-OS

5.4.5 Organization Assignment List ICS 203-OS

5.4.6 Assignment List ICS 204-OS

5.4.7 Communications Plan ICS 205-OS

5.4.8 Medical Plan ICS 206-OS

5.4.9 Incident Organization Chart ICS 207-OS

5.4.10 Incident Status Summary ICS 209-OS

5.4.11 Status Change ICS 210-OS

5.4.12 Check-In List ICS 211

5.4.13 Equipment Check-In List ICS 211e-OS

5.4.14 Personnel Check-In List ICS 211p-OS

SECTION 5
INCIDENT PLANNING, CONTINUED

5.4.15 Unit Log ICS 214-OS

5.4.16 Individual Log ICS 214a-OS

5.4.17 Operational Planning Worksheet 215-OS

5.4.18 Radio Requirements Worksheet 216 ICS 3-82

5.4.19 Radio Frequency Assignment Worksheet 217 ICS

5.4.20 Support Vehicle Inventory 218 ICS 8-78

5.4.21 Air Operations Summary ICS 220-OS

5.4.22 Demob. Check-Out ICS 221-OS

5.4.23 Daily Meeting Schedule ICS 230-OS

5.4.24 Meeting Summary ICS 231-OS

5.4.25 Resources at Risk Summary ICS 232-OS

5.4.26 ACP Site Index ICS 232a-OS

5.5 Site Safety and Health Plan

5.6 Decontamination Plan

5.7 Disposal Plan

5.8 Incident Security Plan

5.9 Alternative Response Strategies

5.9.1 Alternative Strategies Checklist

5.9.2 In-Situ Burn Plan

5.9.3 Bioremediation Checklist

5.10 Demobilization Plan

5.1 DOCUMENTATION PROCEDURES

This section describes documentation procedures associated with oil spill response.Documentation of a spill response provides a historical record, keeps management informed, serves as a legal instrument, and is a means to account for the cleanup costs.

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

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

5.2 STATUS BOARDS AND GENERAL FORMS (NON-ICS)

The use of forms is required to properly facilitate ICS and is a reminder of the important information which should be documented. The forms adopted for the facility are listed and described below and are included in **FIGURE 5.2-1** through **FIGURE 5.2-8.**

The Planning Section Chief is ultimately responsible for ensuring that these forms are maintained and will likely delegate this responsibility to personnel noted below.

The following contains a list and brief description of the forms that are contained in this section.

- **CHRONOLOGY OF EVENTS LOG (FIGURE 5.2-1)**
  To be kept by the Documentation Unit Leader to record major events that occurs during the response

- **RESPONSE EQUIPMENT STATUS BOARD (FIGURE 5.2-2)**
  To be kept by the Resource Unit Leader to maintain status information on all equipment utilized during the response

- **RESPONSE PERSONNEL STATUS BOARD (FIGURE 5.2-3)**
  To be kept by the Resource Unit Leader to maintain status information on all personnel utilized during the response

- **DISPOSITION OF RELEASED MATERIAL (FIGURE 5.2-4)**
  To be kept by the Situation Unit Leader to record oil disposition during the response

- **WEATHER CONDITIONS LOG (FIGURE 5.2-5)**
  To be kept by the Situation Unit Leader to record current weather and water conditions and forecast in the response area

- **PROCUREMENT REQUEST FORM (FIGURE 5.2-6)**
  To be completed and submitted to the Procurement Unit Leader by personnel requesting equipment and personnel; this form is utilized to track procurement of personnel and equipment

- **INCIDENT EXPENDITURES LOG (FIGURE 5.2-7)**
  To be completed and turned in each day by the Cost Unit Leader to keep a running total of expenditures

- **HEALTH AND SAFETY MESSAGE LOG (FIGURE 5.2-8)**
  To be completed and posted each day by the Site Safety Officer to keep on-site personnel aware of current hazards

FIGURE 5.2-1 - CHRONOLOGY OF EVENTS LOG

CHRONOLOGY OF EVENTS LOG		
OPERATIONAL PERIOD COVERED BY THIS REPORT	**DATE**	**TIME**
FROM		
TO		
TIME	**DESCRIPTION OF EVENTS**	
Prepared By: (NAME AND POSITION)		

Page _____ of _____

PHMSA 000089156

FIGURE 5.2-2 - RESPONSE EQUIPMENT STATUS BOARD

RESPONSE EQUIPMENT STATUS BOARD						
DATE:				TIME OF LAST UPDATE:		
EQUIPMENT TYPE/SUPPLIER		ETA TO:		ACTUAL TIME ON SITE:	ASSIGNMENT	STATUS (D,E,S)*
		STAGING	SITE			

***D = Deployed / E = En Route / S = Staged**

FIGURE 5.2-3 - RESPONSE PERSONNEL STATUS BOARD

RESPONSE PERSONNEL STATUS BOARD							
DATE:					TIME OF LAST UPDATE:		
NUMBER	AFFILIATION:	TIME ORDERED:	ETA TO:		ACTUAL TIME ON SITE:	ASSIGNMENT:	STATUS (O,E,S)*
			STAGING	SITE			

*O = On Site / E = En Route / S = Staged

PHMSA 000089158

FIGURE 5.2-4 - DISPOSITION OF RELEASED MATERIAL

DISPOSITION OF RELEASED MATERIAL (BBL)					
Time	In Marsh	In Water	Evaporated	Recovered	Remaining

FIGURE 5.2-5 - WEATHER CONDITIONS LOG

WEATHER CONDITIONS LOG		
DATE:	CURRENT TIME:	
PRESENT CONDITIONS		
TEMPERATURE (°F):	CEILING:	VISIBILITY:
BAROMETRIC PRESSURE:	WIND DIRECTION:	WIND SPEED:
HUMIDITY:	OTHER:	
WATER CONDITIONS		
WAVE HEIGHT (FT):	WATER TEMPERATURE (°F):	
CURRENT DIRECTION:	CURRENT SPEED:	
SWELL HEIGHT (FT):	SWELL INTERVAL (FT):	
TIDES		
NEXT HIGH:	NEXT LOW:	PRESENT STATUS:
CURRENT FORECAST		
24 HR / 48 HR FORECAST		

FIGURE 5.2-6 - PROCUREMENT REQUEST FORM

PROCUREMENT REQUEST FORM	
Incident Name:	Date/Time:
Requested By:	Location:
Description: (include quantity, size, unit, etc.)	
Deliver To: (be specific)	
Date/Time Required:	How To Contact:
Received By:	Date/Time:
Status:	ETA:
Company Contacted:	Person Contacted:
Company Phone:	Date/Time Contacted:
Return a copy of this form to person making request after processing.	

FIGURE 5.2-7 - INCIDENT EXPENDITURES LOG

DATE	ITEM	COMPANY	P.O. or INVOICE #	CONTRACT NUMBER	ESTIMATED COST

Page _____ of _____

FIGURE 5.2-8 - HEALTH AND SAFETY MESSAGE LOG

HEALTH AND SAFETY MESSAGE LOG	1. INCIDENT NAME	2. DATE/TIME PREPARED	3. OPERATIONAL PERIOD
GENERAL HEALTH AND SAFETY ADVISORIES			
SPECIFIC HEALTH AND SAFETY ADVISORIES			
SHORE SECTOR/ TASK FORCE	**HAZARDS**	**PRECAUTIONS**	
PREPARED BY:		**REVIEWED BY:**	

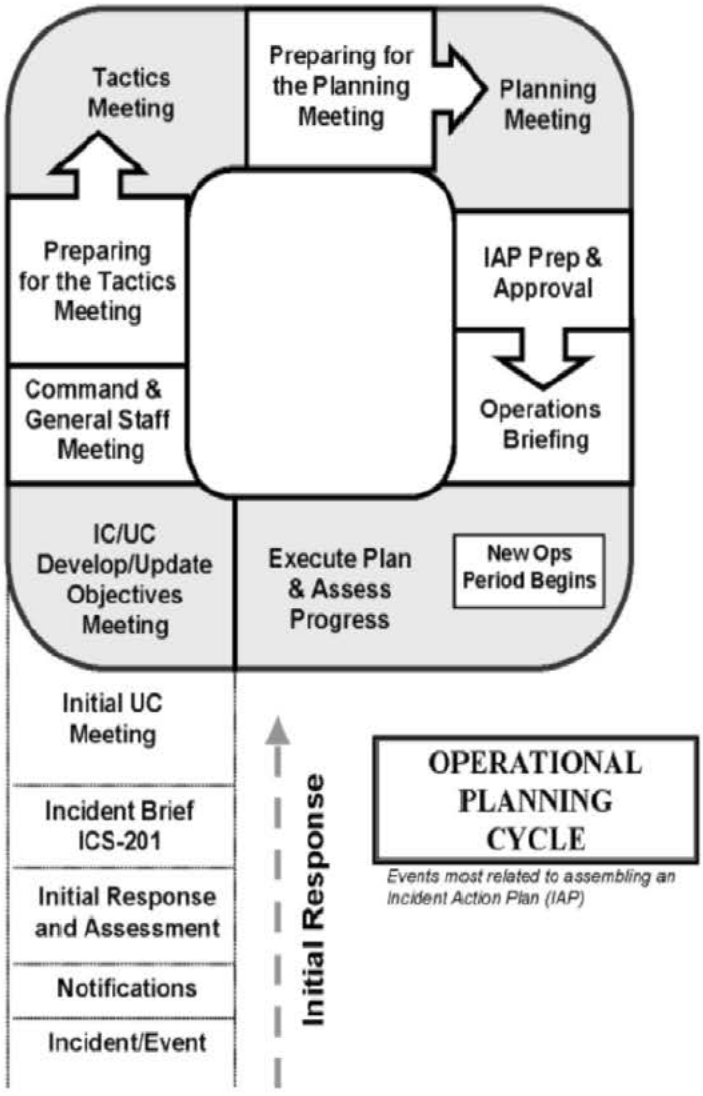
5.3 INCIDENT ACTION PLAN PROCESS AND MEETINGS

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

Longer-term, more complex responses, will likely require a dedicated Planning Section Chief (PSC) who must arrange for transition into the OPERATIONAL PERIOD PLANNING CYCLE. Certain meetings, briefings, and information-gathering during the Cycle lead to the Incident Action Plan (IAP) that guides operations of the next operational period. Only the meetings and events directly relevant to assembling the IAP are described. The IC/UC specifies the operational periods (e.g., 12-hour shifts, sunrise to sunset, 24-hour shifts etc.).

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

FIGURE 5.3-1 - OPERATIONAL PERIOD PLANNING CYCLE



5.3.1 Incident Occurs / Notifications

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

5.3.2 Initial Response and Assessment

INCIDENT BRIEFING (ICS 201)

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

When: New IC/UC; staff briefing, as required
Briefer: Current IC/UC
Attendees: Prospective IC/UC; Command, and General Staff, as required
Agenda: Using ICS 201 as an outline, included:

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

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

5.3.3 Unified Command Objectives Meeting

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

When: Prior to Tactics Meeting
Facilitator: UC Member
Attendees: UC Members; Command and General Staff, as appropriate
Agenda:

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

5.3.4 Tactics Meeting

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

When: Prior to Planning Meeting
Facilitator: Planning Section Chief
Attendees: Planning Section Chief, Operations Section Chief, Logistics Section Chief, Resources Unit Leader, Situation Unit Leader, and Environmental Unit Leader
Agenda:

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

5.3.5 Planning Meeting

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

When: After the Tactics Meeting
Facilitator: Planning Section Chief
Attendees: Determined by IC/UC, generally IC/UC, Command Staff, General Staff, Air Operations Section Chief, Resources Unit Leader, Situation Unit Leader, Environmental Unit Leader, and Technical Specialists, as required
Agenda:

5.3.5 Planning Meeting, Continued

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

5.3.6 Incident Action Plan (IAP) Preparation and Approval

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

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

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

Optional Components (use as pertinent):

Optional Components (use as pertinent):		Responsible to Prepare
1.	Air Operations Summary (ICS 220)	[Air Operations Branch Director]
2.	Traffic Plan	[Ground Support Unit Leader]
3.	Demobilization Plan	[Demobilization Unit Leader]

5.3.7 Operations Briefing

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

When: About an hour prior to each shift
Facilitator: Planning Section Chief
Attendees: IC/UC, Command Staff, General Staff, Branch Directors, Division/Group Supervisors, Task Force/Strike Team Leaders (if possible), Unit Leaders, others as appropriate.

Agenda:		Responsible to Present
1.	Review of IC/UC Objectives, changes to IAP.	[Planning Section Chief]
2.	Current response actions and last shift's accomplishments.	[Operations Section Chief]
3.	Weather and sea conditions forecast.	[Situation Unit Leader]
4.	Division/Group and air operations assignment.	[Operations Section Chief]
5.	Trajectory analysis.	[Situation Unit Leader]
6.	Transport, communications, supply updates.	[Logistics Section Chief]
7.	Safety message.	[Safety Officer]
8.	Financial report.	[Finance/Administration Section Chief]
9.	News Media report.	[Information Officer]
10.	Assisting/cooperating organization/agency reports of concern.	[Liaison Officer]
11.	Incident Action Plan endorsement and motivational remarks.	[IC/UC]

5.3.8 Assess Progress

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

SPECIAL PURPOSE MEETINGS

5.3.9 Initial Unified Command Meeting

Provides UC officials with an opportunity to discuss and concur on important issues prior to joint incident action planning. The meeting should be brief, and important points documented. Prior to the meeting, parties should review and prepare to address the agenda items. Planning Meeting participants will use the results of this meeting to guide the response efforts.

5.3.9 Initial Unified Command Meeting, Continued

When: When UC is formed, prior to the first operational period Planning Meeting
Facilitator: UC member
Attendees: Only ICs who will comprise UC
Agenda:

1. Identify jurisdictional priorities and objectives.
2. Present jurisdictional limitations, concerns, restrictions.
3. Develop collective set of incident objectives.
4. Establish and agree on acceptable priorities.
5. Adopt an overall strategy to accomplish objectives.
6. Agree on basic organizational structure and size.
7. Designate the best-qualified and acceptable Operations Section Chief.
8. Agree on General Staff personnel designations and planning, logistical, and finance agreements and procedures.
9. Agree on resource ordering procedures.
10. Agree on cost-sharing procedures.
11. Agree on informational matters.
12. Designate a Unified Command spokesperson.

5.3.10 Command Staff Meeting

Coordinate Command Staff functions, responsibilities and objectives. It is scheduled as necessary by the IC/UC. Command Staff (IC/UC, Safety Officer, Liaison Officer, Information Officer) attend.

5.3.11 Command and General Staff Breakfast / Supper

An opportunity for the Command (IC/UC, Safety Officer, Liaison Officer, Information Officer) and General Staff (Operations Section Chief, Planning Section Chief, Logistics Section Chief, Finance/Administration Section Chief) to gather under informal and relaxing conditions to share and update each other on developing issues.

5.3.12 Business Management Meeting

This under-30-minute meeting is for participants to develop and update the operating plan for finance and logistics support. The agenda could include: finance requirements and criteria imposed by contributing organizations, business operating plan for resource procurement and incident funding, cost analysis and financial summary data. Attendees include: Finance/Administration Section Chief, Cost Unit Leader, Logistics Section Chief, Supply Unit Leader, Demobilization Unit Leader. It is generally conducted before the PLANNING MEETING.

5.3.13 Agency Representative Meeting

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

5.3.14 News Briefing

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

5.4 ICS FORMS

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

- **INCIDENT BRIEFING FORM - ICS 201 (Initial Report Only)**

  For use by the Command Staff to gather information on the Emergency Management Team's (EMT) efforts to implement applicable response plans. It is prepared by the initial Incident Commander (IC) for providing documentation of the initial response.

- **INCIDENT ACTION PLAN**

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

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

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

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

  - **INCIDENT OBJECTIVES - ICS 202**

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

  - **ORGANIZATION ASSIGNMENT LIST - ICS 203**

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

  - **ASSIGNMENT LIST - ICS 204**

    Submits assignments at the level of Division and Groups.

  - **COMMUNICATIONS PLAN - 205**

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

  - **MEDICAL PLAN - ICS 206**

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

5.4 ICS FORMS, CONTINUED

All ICS Forms are available electronically via the Forms Navigator.

- **INCIDENT STATUS SUMMARY - ICS 209**

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

- **UNIT LOG - ICS 214**

  Used to log activities for an entire unit.

- **INDIVIDUAL LOG - ICS 214a**

  Used to log activities for an individual.

5.4.1 Incident Action Plan (IAP) Cover Sheet

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

3. Approved by:

FOSC _____

SOSC _____

RPIC _____

_____

_____

INCIDENT ACTION PLAN

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

☐ ICS 202-OS (Response Objectives)

_____

☐ ICS 203-OS (Organization List) -OR- ICS 207-OS (Organization Chart)

_____

☐ ICS 204-OSs (Assignment Lists)
One Copy each of any ICS 204-OS attachments:

- ☐ Map
- ☐ Weather forecast
- ☐ Tides
- ☐ Shoreline Cleanup Assessment Team Report for location
- ☐ Previous day's progress, problems for location

_____

☐ ICS 205-OS (Communications List)

_____

☐ ICS 206-OS (Medical Plan)

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

4. Prepared By:	Date/Time:

IAP COVER SHEET June 2000

1. Incident Name	GENERAL PLAN
2. Prepared By Date/Time Prepared	3. Operational Period (Date/Time) From: To:
4. Notification (Date and time completed)	5. Response Initiation (Date and time completed)

6. Plan Item — Timeframe ==> (Enter days or weeks)	
Site Characterization, Forecasts, and Analysis	
Site Safety	
Site Security	
Source Stabilization, Salvage, and Lightering	
Surveillance	
On Water Containment and Recovery	
Sensitive Areas / Resources at Risk	
Alternative Response Technology	
Shoreline Protection and Recovery	
Wildlife Protection and Rehabilitation	
Logistics Support	
Response Organization	
Communications	
Public Information	
Financial Management and Cost Documentation	
NRDA and Claims	
Training	
Information Management	
Restoration / Mitigation	
Waste Management	
Demobilization	

5.4.3 Incident Briefing ICS 201-OS

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 1 of 4)
3. Map/Sketch	(Include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines or other graphics depicting situational and response status)	

5.4.3 Incident Briefing ICS 201-OS, Continued

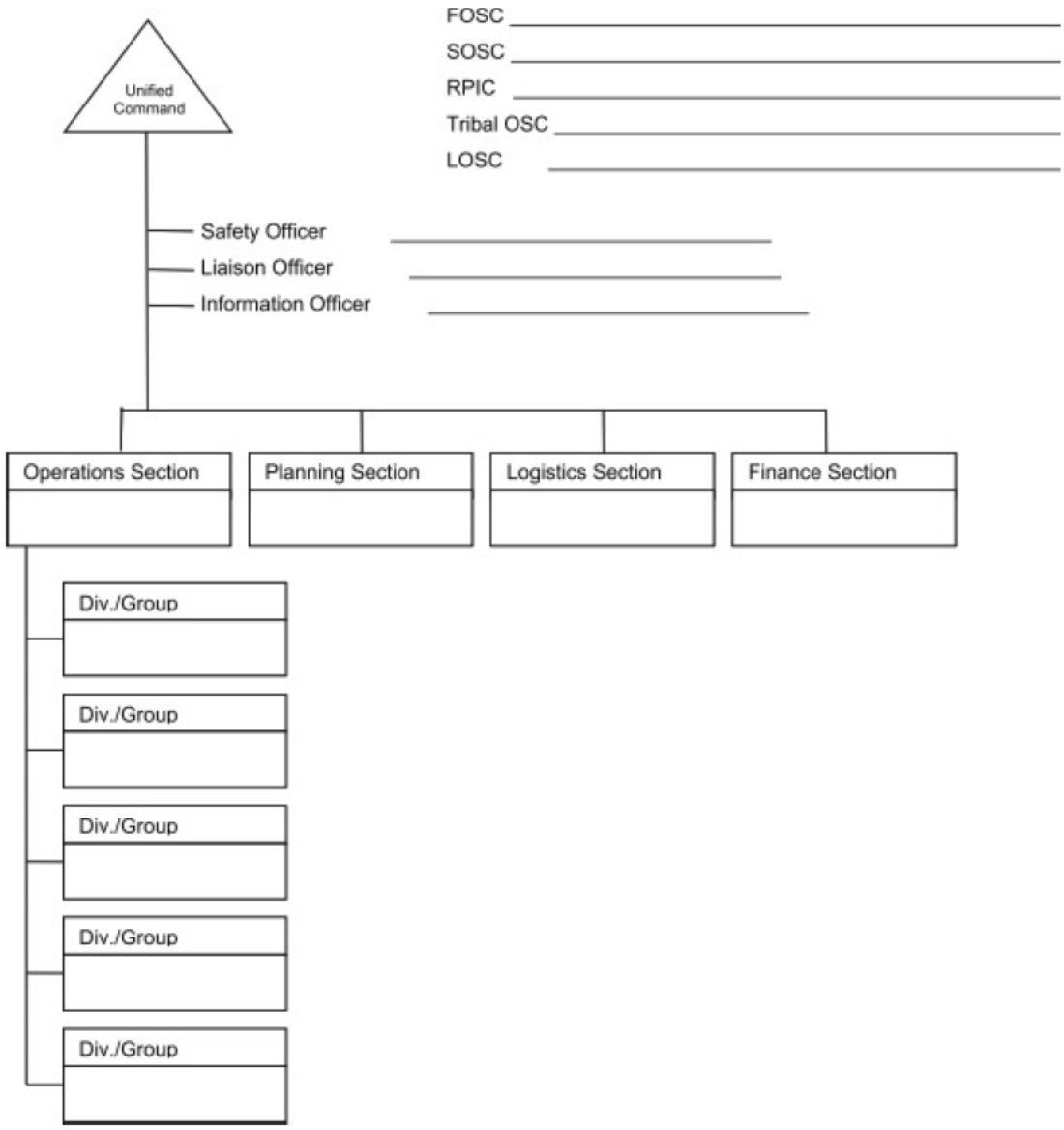
1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 2 of 4)
4. Initial Incident Objectives		
5. Summary of Current Actions		

Time	Action/Note

5.4.3 Incident Briefing ICS 201-OS, Continued

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 3 of 4)

3. Current Organization



5.4.3 Incident Briefing ICS 201-OS, Continued

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 4 of 4)

7. Resources Summary

Resources Needed	Time Ordered	Resource Identifier	ETA	On Scene? (X)	Notes: (Location/Assignment/Status)

5.4.4 Incident Objectives ICS 202-OS

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

3. Overall Incident Objective(s)	Assigned to:	Status:
☐ 1. Ensure the Safety of Citizens and Response Personnel		
☐ 2. Control the Source of the Spill		
☐ 3. Manage a Coordinated Response Effort		
☐ 4. Maximize Protection of Environmentally-Sensitive Areas		
☐ 5. Contain and Recover Spilled Material		
☐ 6. Recover and Rehabilitate Injured Wildlife		
☐ 7. Remove Oil from Impacted Areas		
☐ 8. Minimize Economic Impacts		
☐ 9. Keep Stakeholders and Public Informed of Response Activities		
☐ 10. _____		

4. Objectives for Specified Operational Period

5. Safety Message for Specified Operational Period

Approved Site Safety Plan Located at:

6. Weather **See Attached Weather Sheet**

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

8. Time of Sunrise **Time of Sunset**

9. Attachments (check if attached)

☐ Organization List (ICS 203-OS)	☐ Medical Plan (ICS 206-OS)	☐ _____
☐ Assignment List (ICS 204-OS)	☐ Incident Map(s)	☐ _____
☐ Communications Plan (ICS 205-OS)	☐ Traffic Pattern	☐ _____

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

INCIDENT OBJECTIVES June 2000 ICS 202-OS

5.4.5 Organization Assignment List ICS 203-OS

*FILL IN THOSE POSITIONS UTILIZED

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

3. Incident Commander and Staff

	Primary	Deputy
Federal:		
State:		
RP(s):		
Safety Officer:		
Information Officer:		
Liaison Officer:		

4. Agency Representatives

Agency	Name

5. PLANNING SECTION

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

6. LOGISTICS SECTION

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

7. OPERATIONS SECTION

Chief		
Deputy		
a. Branch I - Division/Groups		
Branch Director		
Deputy		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
b. Branch II - Division/Groups		
Branch Director		
Deputy		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
c. Branch III - Division/Groups		
Branch Director		
Deputy		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
Division / Group		
d. Air Operations Branch		
Air Operations Br. Dir.		
Air Tactical Supervisor		
Air Support Supervisor		
Helicopter Coordinator		
Fixed-wing Coordinator		

8. FINANCE/ADMINISTRATION SECTION

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

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

ORGANIZATION ASSIGNMENT LIST June 2000 ICS 203-OS

5.4.6 Assignment List ICS 204-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	ASSIGNMENT LIST ICS 204-OS
3. Branch	4. Division/Group	

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: _____

Branch Director: _____

Division/Group Supervisor: _____

6. Resources Assigned This Period "X" indicates 204a attachment with special instructions ↓

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

7. Assignments

8. Special Instruction for Division/Group

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

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

Emergency Communications
Medical _____ Evacuation _____ Other _____

10. Prepared By (Resources Unit Leader)	Date/Time	11. Approved By (Planning Section Chief)	Date/Time

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

3. BASIC RADIO CHANNEL USE

SYSTEM / CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS

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

INCIDENT COMMUNICATIONS PLAN June 2000 ICS 205-OS

5.4.8 Medical Plan ICS 206-OS

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

3. Medical Aid Stations

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

4. Transportation

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

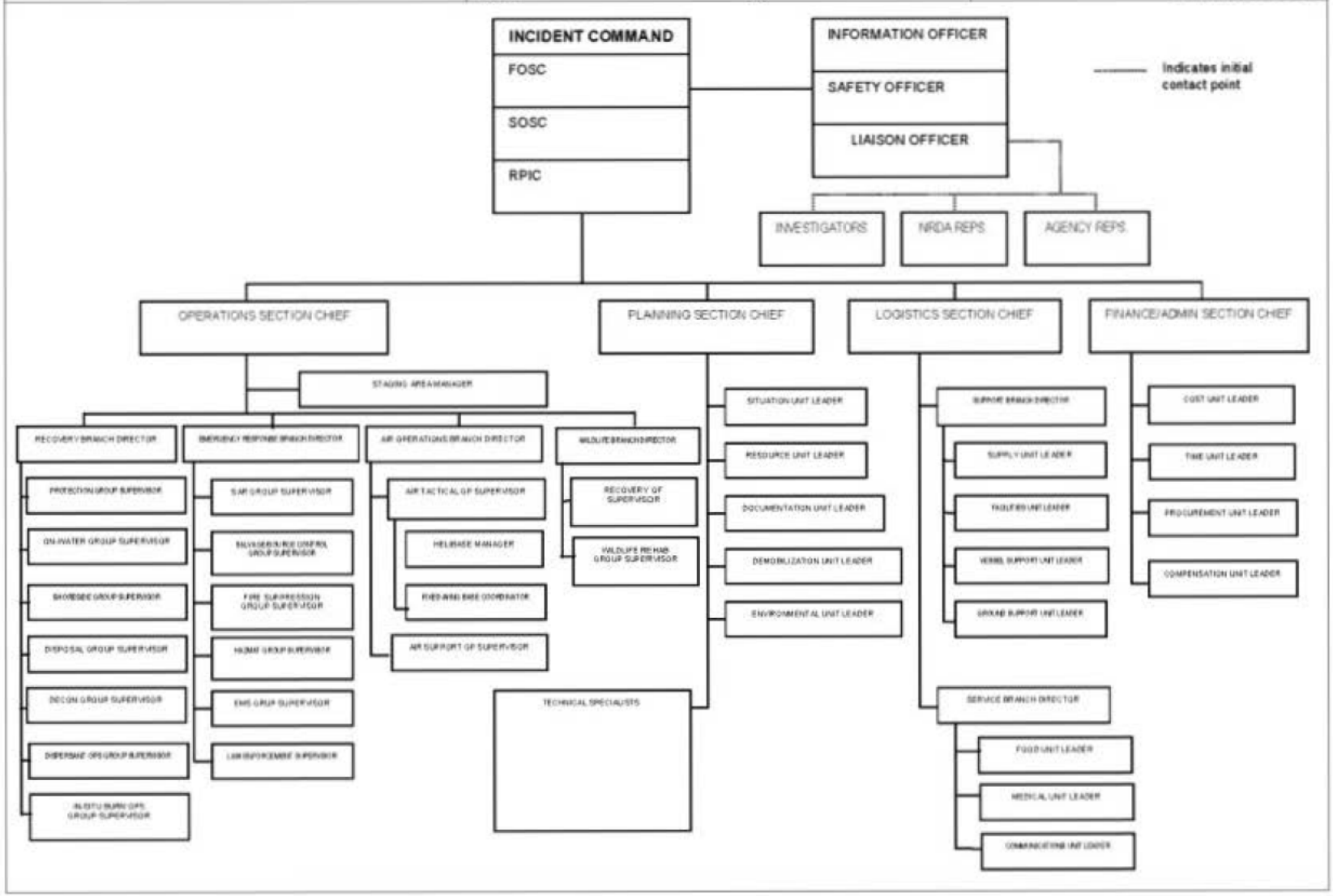
5. Hospitals

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

6. Special Medical Emergency Procedures

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

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



5.4.10 Incident Status Summary ICS 209-OS

1. Incident Name	2. Period Covered By Report From: To:	Time of Report	INCIDENT STATUS SUMMARY ICS 209-OS

3. Spill Status (Estimated, in Barrels) [OPS/EUL/SSC]

Source Status:
- Secured
- Unsecured

Remaining Potential (bbl):

Rate of Spillage (bbl/hr):

	Since Last Report	Total
Volume Spilled		
Mass Balance/Oil Budget		
Recovered Oil		
Evaporation		
Natural Dispersion		
Chemical Dispersion		
Burned		
Floating, Contained		
Floating, Uncontained		
Onshore		
Total Spilled Oil Accounted For:		

4. Waste Management (Estimated) [OPS/Disposal]

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

5. Shoreline Impacts (Estimated, in miles) [PSC/EUL/SSC]

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

6. Wildlife Impacts [OPS/Wildlife Br.]

Numbers in ( ) indicate subtotal that are threatened / endangered species.					Died in Facility	
	Captured	Cleaned	Released	DOA	Euth.	Other
Birds						
Mammals						
Reptiles						
Fish						
Total						

7. Safety Status [Safety Officer]

	Since Last Report	Total
Responder Injury		
Public Injury		

8. Equipment Resources [RUL]

Description	Ordered	Available / Staged	Assigned	Out of Service
Spill Resp. Vels				
Fishing Vessels				
Tugs				
Barges				
Other Vessels				
Skimmers				
Boom (ft.)				
Shrt/Snr Bm. (ft.)				
Vacuum Trucks				
Helicopters				
Fixed Wing				

9. Personnel Resources [RUL]

Description	People in Cmd. Post	People in the Field	Total People On Scene
Federal			
State			
Local			
RP			
Contract Personnel			
Volunteers			
Total Response Personnel From All Organizations:			

10. Special Notes

11. Prepared By (Situation Unit Leader)

INCIDENT STATUS SUMMARY June 2000 ICS 209-OS

5.4.11 Status Change ICS 210-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	STATUS CHANGE ICS 210-OS
3. Personnel / Resource Name or I.D.		
4. New Status ☐ Available / Staged ☐ Assigned _____ ☐ Out of Service		
5. FROM Location or Status	6. TO Location or Status	
7. Time of Location / Status Change		
8. Comments		
9. Prepared by:	Date / Time	
10. Processed by: (Resource Unit)	Date / Time	
STATUS CHANGE	June 2000	ICS 210-OS

5.4.12 Check-In List ICS 211

CHECK-IN LIST					1. INCIDENT NAME			2. CHECK-IN LOCATION ___ BASE ___ CAMP ___ STAGING AREA ___ ICP RESOURCES ___ HELIBASE								3. DATE/TIME	
CHECK-IN INFORMATION																	
4. LIST PERSONNEL (OVERHEAD) BY AGENCY & NAME – OR - LIST EQUIPMENT BY THE FOLLOWING FORMAT:					5. ORDER/ REQUEST NUMBER	6. DATE/TIME CHECK-IN	7. LEADER'S NAME	8. TOTAL NO. PERSONNEL	9. MANIFEST		10. CREW WEIGHT OR INDIVIDUALS WEIGHT	11. HOME BASE	12. DEPARTURE POINT	13. METHOD OF TRAVEL	14. INCIDENT ASSIGNMENT	15. OTHER QUALIFICATION	16. SENT TO RESOURCES TIME/INT
AGENCY	SINGLE T/F S/T	KIND	TYPE	I.D. NO./NAME					YES	NO							

17. ICS 211 PAGE ___ of ___

18. PREPARED BY (NAME AND POSITION) USE BACK FOR REMARKS OR COMMENTS

1. Incident Name	2. Operational Period (Date / Time) From: To:	3. Check-in Location ☐ Command Post ☐ Other ☐ Staging Area ____	CHECK-IN LIST (Equipment) ICS 211e-OS

Equipment Check-in Information					9. Initial Incident Check-In?	10. Time	
4. Equipment Description	5. Equipment Identifier	6. Supplier/Owner	7. Assignment	8. Contact Information	(X)	In	Out
					☐		
					☐		
					☐		
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11. Prepared by: Date / Time	12. Date / Time Sent to Resources Unit

CHECK-IN LIST (Equipment) June 2000 ICS 211e-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	3. Check-in Location ☐ Command Post ☐ Other ☐ Staging Area	**CHECK-IN LIST (Personnel)** **ICS 211p-OS**

Personnel Check-in Information				8. Initial Incident Check-In?	9. Time	
4. Name	5. Company/Agency	6. ICS Section / Assignment / Quals.	7. Contact Information	(X)	In	Out
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10. Prepared by: Date / Time	11. Date / Time Sent to Resources Unit

5.4.15 Unit Log ICS 214-OS

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

5. Personnel Assigned		
Name	ICS Position	Home Base

6. Activity Log (Continue on Reverse)	
Time	Major Events

7. Prepared by:	Date / Time

5.4.15 Unit Log ICS 214-OS, Continued

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

6. Activity Log (Continue on Reverse)	
Time	Major Events

7. Prepared by:	Date / Time

5.4.16 Individual Log ICS 214a-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	INDIVIDUAL LOG ICS 214a-OS

3. Individual Name	4. ICS Section	5. Assignment / Location

6. Activity Log	Page of

Time	Major Events

7. Prepared by: Date / Time

1. Incident Name	2. Operational Period (Date/Time) From: To:	OPERATIONAL PLANNING WORKSHEET ICS 215-OS

3. Division/ Group or Location	4. Work Assignments	5. Resource/Equipment														9. "X" here if 204a Needed			
		Resource														6. Notes/Remarks	7. Reporting Location	8. Requested Arrival Time	
		Req.																	☐
		Have																	
		Need																	
		Req.																	☐
		Have																	
		Need																	
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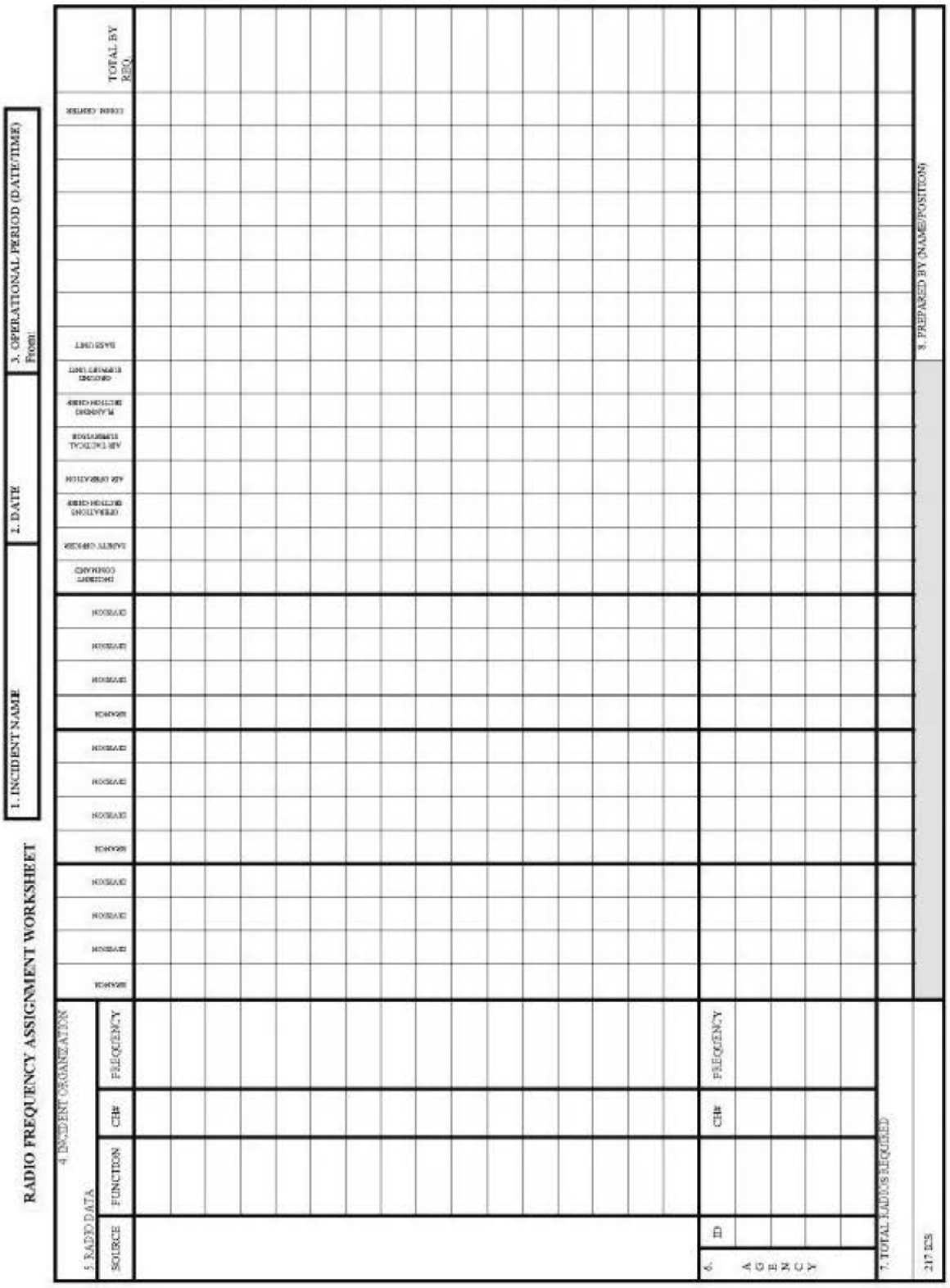
		Need																	
		Req.																	☐
		Have																	
		Need																	
10. Total Resources Required																13. Prepared by:			
11. Total Resources On Hand																Date		Time	
12. Total Resources Needed																			

RADIO REQUIREMENTS WORKSHEET			1. INCIDENT NAME			2. DATE			3. TIME		
4. BRANCH			5. AGENCY			6. OPERATIONAL PERIOD			7. TACTICAL FREQUENCY		
8. DIVISION/GROUP AGENCY			DIVISION/ GROUP AGENCY			DIVISION/ GROUP AGENCY			DIVISION/ GROUP AGENCY		
9. AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS
216 ICS 3-82			PAGE			10. PREPARED BY (COMMUNICATIONS UNIT)					

5.4.19 Radio Frequency Assignment Worksheet 217 ICS



SUPPORT VEHICLE INVENTORY (USE SEPARATE SHEET FOR EACH VEHICLE CATEGORY)	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED

VEHICLE INFORMATION

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

218 ICS 8-78	PAGE	5. PREPARED BY (GROUND SUPPORT UNIT)

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

3. Distribution ☐ Fixed-Wing Bases _____ ☐ Helibase _____

4. Personnel and Communications	Air Operations Director	Air / Air Frequency	Air / Ground Frequency
Air Operations Director			
Air Tactical Supervisor			
Air Support Supervisor			
Helicopter Coordinator			
Fixed-Wing Coordinator			

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

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

14. Air Operation Support Equipment	15. Prepared by	Date / Time

5.4.22 Demob. Check-Out ICS 221-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	DEMOB. CHECK-OUT ICS 221-OS
3. Unit Name / Personnel Released	4. Release Date / Time	

5. Unit / Personnel

You and your resources have been released, subject to signoff from the following:
(Demob. Unit Leader "X" appropriate box(es))

Logistics Section

- ☐ Supply Unit _____
- ☐ Communications Unit _____
- ☐ Facilities Unit _____
- ☐ Ground Unit _____

Planning Section

- ☐ Documentation Unit _____

Finance / Admin. Section

- ☐ Time Unit _____

Other

- ☐ _____ _____
- ☐ _____ _____
- ☐ _____ _____

6. Remarks

_____
_____
_____
_____

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

5.4.23 Daily Meeting Schedule ICS 230-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	DAILY MEETING SCHEDULE ICS 230-OS

3. Meeting Schedule (Commonly-held meetings are included)

Date/ Time	Meeting Name	Purpose	Attendees	Location
	Tactics Meeting	Develop primary and alternatestrategies to meet Incident Objectives for the next Operational Period.	PSC, OPS, LSC, EUL, RUL & SUL	
	Planning Meeting	Review status and finalize strategies and assignments to meet Incident Objectives for the next Operational Period.	Determined by the IC/UC	
	Operations Briefing	Present IAP and assignments to the Supervisors / Leaders for the next Operational Period.	IC/UC, Command Staff, General Staff, Branch Directors, Div. Sups., Task Force/Strike Team Leaders and Unit Leaders	
	Unified Command Objectives Meeting	Review/ identify objectives for the next operational period.	Unified Command members	

7. Prepared by: (Situation Unit Leader) **Date / Time**

DAILY MEETING SCHEDULE **June 2000** **ICS 230-OS**

5.4.24 Meeting Summary ICS 231-OS

1. Incident Name	2. Meeting Date / Time	MEETING SUMMARY ICS 231-OS
3. Meeting Name		
4. Meeting Location		
5. Facilitator		
6. Attendees		
7. Notes (with summary of decisions and action items)		
8. Prepared by:	Date / Time	
MEETING SUMMARY	June 2000	ICS 231-OS

5.4.25 Resources at Risk Summary ICS 232-OS

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

3. Environmentally-Sensitive Areas and Wildlife Issues

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

Narrative

4. Archaeo-cultual and Socio-economic Issues

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

Narrative

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

5.4.26 ACP Site Index ICS 232a-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	ACP SITE INDEX ICS 232a-OS

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

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

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

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

5.5 SITE SAFETY AND HEALTH PLAN

Date: _____ NRC Assigned Number: _____

SITE SAFETY PLAN

I. General

☐ Platform	☐ Air	☐ Spill to Water	☐ Excavation	☐ Other:_____	☐ AFE#:_____

Facility: _____ Issuing Date: _____ Time: _____
Location: _____ Temperature: _____
Work to be performed: _____ Wind Direction: _____
Humidity: _____

II. Hazards to be Evaluated

Y N		Y N		Y N	
☐	☐ Oxygen Deficient/Enriched	☐	☐ Ingestion / Skin Absorption	☐	☐
☐	☐ Flammable Atmosphere	☐	☐ Chemical/MSDS #_____	☐	☐
	(Explosion Fire)		(Must be attached)	☐	☐
☐	☐ Toxic Atmosphere:_____	☐	☐ Physical Hazard _____	☐	☐
☐	☐ Boat Operations	☐	☐ Vapor Cloud	☐	☐
☐	☐ Confined Space			☐	☐
				☐	☐ Other (see comments)_____

III. Testing & Monitoring (Check required items)

Tests are to be performed in the order listed.

Y N	Continuous Frequency	ACCEPTABLE ENTRY CONDITIONS: No Respiratory Protection Needed	Special Work Practices or PPE Required	Leave Area Work Efforts Should Be Directed At Reducing Concentrations
☐ ☐ Oxygen Level	☐ Y ☐ N_____ every _____	19.5 - 23.0% in air	<19.5% or 23.0% in air	<16.0 or >23.5% in air
☐ ☐ LEL	☐ Y ☐ N_____ every _____	<10% in air	≥10.0 but <20.0% in air	≥20.0% in air
☐ ☐ Hydrogen Sulfide	☐ Y ☐ N_____ every _____	<10 ppm	≥10 but <100 ppm	≥100 ppm
☐ ☐ Benzene	☐ Y ☐ N_____ every _____	<.5 ppm	≥.5 but <10 ppm	≥10 ppm
☐ ☐ Total Hydrocarbons	☐ Y ☐ N_____ every _____	<300 ppm	≥300 but <750 ppm	≥750 ppm
☐ ☐ Other:_____	☐ Y ☐ N_____ every _____	As allowed by applicable standard(s) Acceptable for 5325 feet of elevation and below. Hot work is not permitted when LEL is greater than 10% in air.		

IV. Required Personal Protective Equipment (PPE) (Check for required use)

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

V. Emergency Information and Rescue Services

Emergency Contact Person:	_____	Contact by: _____
Fire Department:	911	Contact by: _____
Ambulance:	911	Contact by: _____
Hospital:	911	Contact by: _____
Rescue Services:	911	Contact by: _____

(if not provided by above)

5.5 SITE SAFETY AND HEALTH PLAN, CONTINUED

Date: _____ NRC Assigned Number: _____

VI. Required Safety & Rescue Equipment (on site)

☐ Lights	☐ Fall Protection	☐ First Aid Kit	☐ Drinking Water	☐ Fire Extinguisher	☐ Tripod	☐ Other:_____
☐ Ladder	☐ Retrieval Lines	☐ Resuscitator	☐ Communication Method _____			

VII. Comments or Special Work Procedures

VIII. Report All Injuries Immediately

IX. Control Measures

• Isolation & Lockout (identify items to be locked out)	• Ventilation ☐ Natural ☐ Mechanical
• Establish Work Zones when completed	• Continuous ☐ No ☐ Yes
☐ Hot Zone = Red Ribbon	• Flagman / Watchman ☐
☐ Warm Zone = Yellow Ribbon	• Confined Space - Safety Watch ☐
☐ Cold Zone = Blue Ribbon	(See Exhibit "B" for Permit)
	☐ Air Horn - Emergency
	☐ Primary Route
	☐ Secondary Route

5.5 SITE SAFETY AND HEALTH PLAN, CONTINUED

Date: _____ NRC Assigned Number: _____

X. Control Measures														
	Zone													
Oxygen	Time													
	Level													
	By													
LEL	Time													
	Level													
	By													
Hydrogen Sulfide	Time													
	Level													
	By													
Benzene	Time													
	Level													
	By													
VOC	Time													
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Equipment: Type: _____ Mfger: _____ Calibration/Expiration: _____

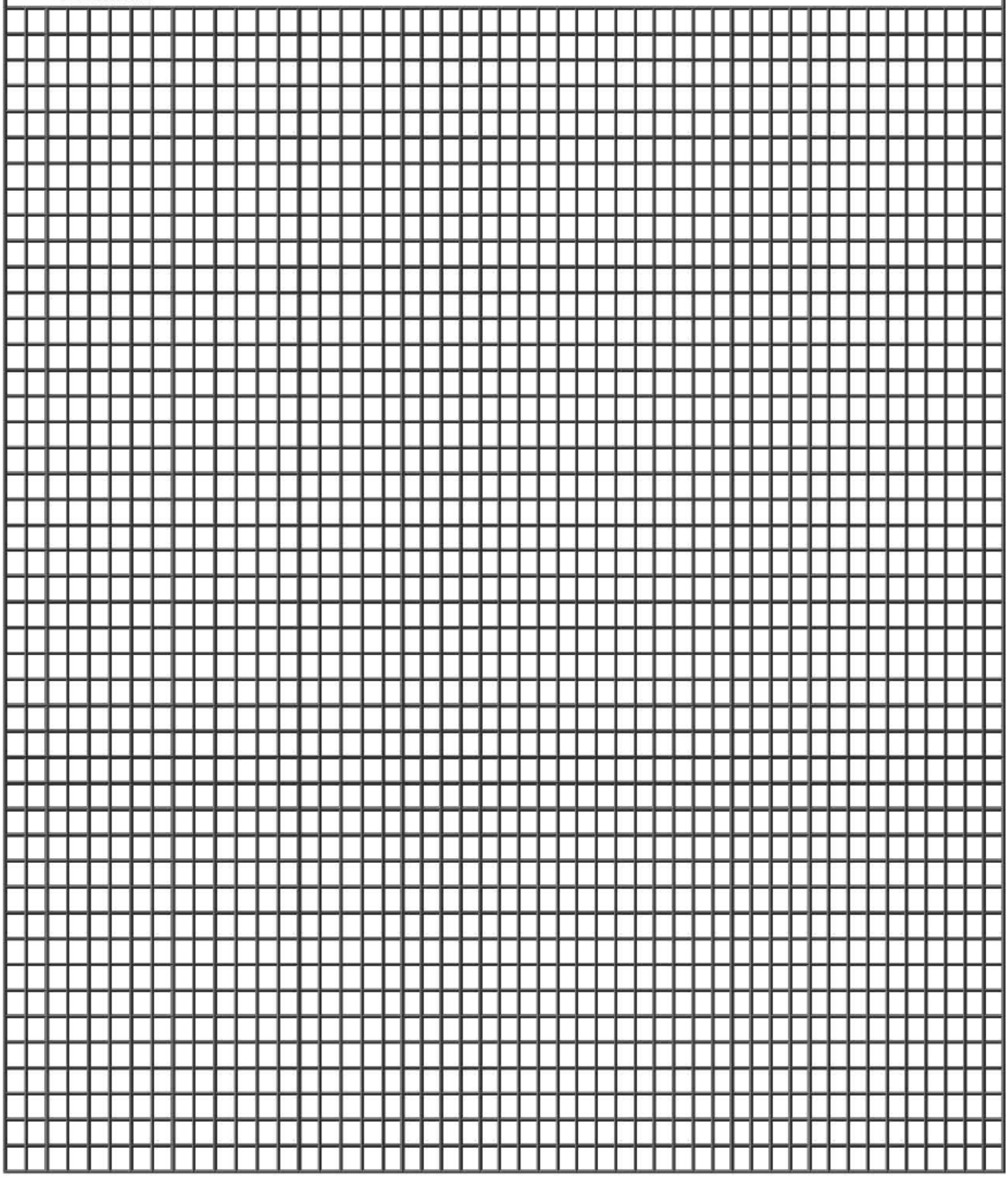
Type: _____ Mfger: _____ Calibration/Expiration: _____

5.5 SITE SAFETY AND HEALTH PLAN, CONTINUED

Date: _____ NRC Assigned Number: _____

XI. Work Area Diagram

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



5.5 SITE SAFETY AND HEALTH PLAN, CONTINUED

Date: _____ NRC Assigned Number: _____

XII. Work Site Signatures

Signature	
Incident Commander	
Safety Officer	

Other Site Personnel	Signature	Other Site Personnel	Signature

XIII. Authorizing Signature

Site Safety Manager: Printed Name: _____ Signature: _____

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

5.6 DECONTAMINATION PLAN

Incident Name: _____ **Location:** _____

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

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

- **Decontamination Zones:**

  Work areas will be divided into three zones;
  - Support Zone
  - Contamination Reduction Zone
  - Exclusion 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 (PPE). The crews are responsible for packaging and labeling of contaminated PPE.

- **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.

5.6 DECONTAMINATION PLAN, CONTINUED

Procedures for these stations are as follows:

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

5.6 DECONTAMINATION PLAN, CONTINUED

Procedures for these stations are as follows:

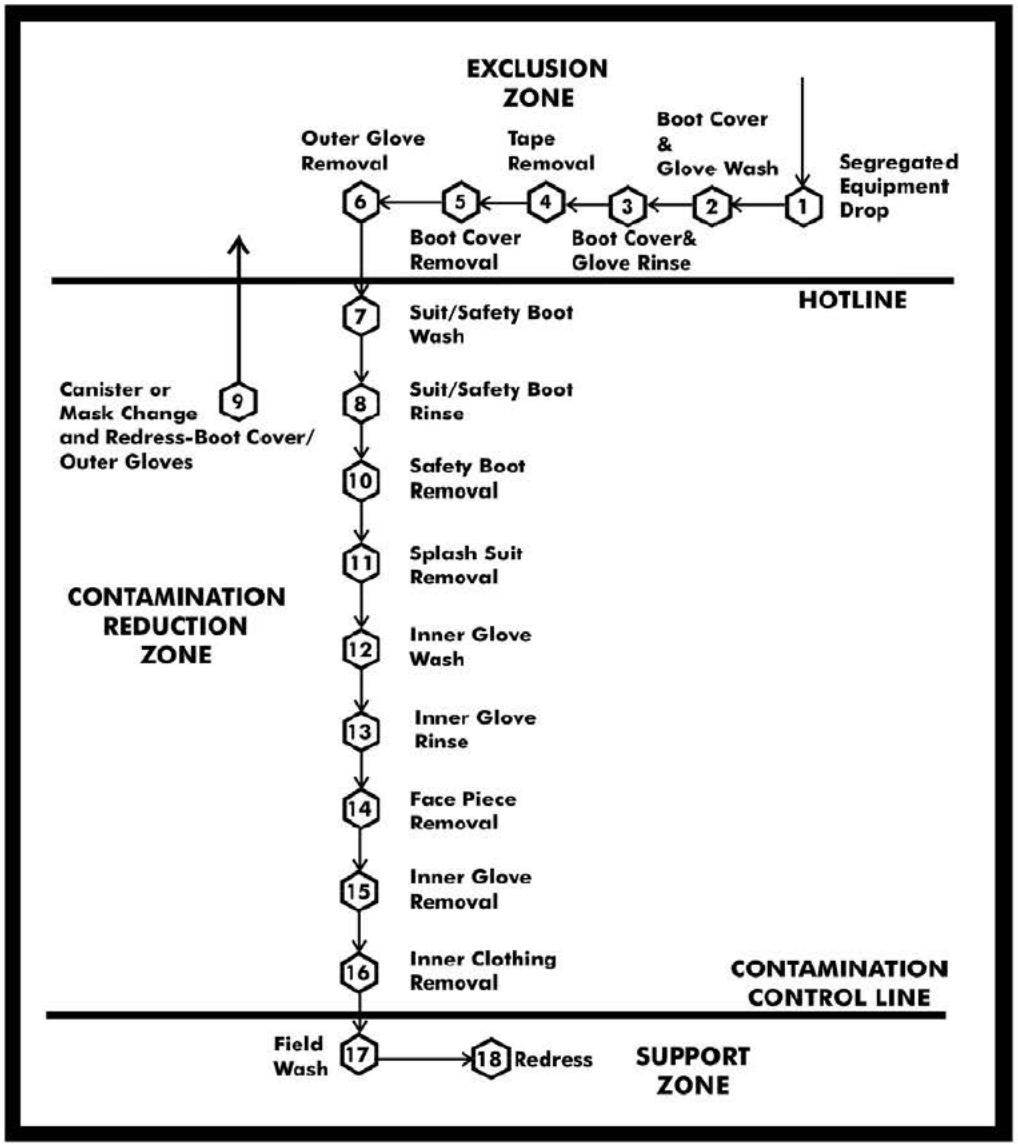
MAXIMUM MEASURES FOR DECONTAMINATION, CONTINUED		
STATION 17	Field Wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
STATION 18	Redress	Put on clean clothes.

5.6 DECONTAMINATION PLAN, CONTINUED

MINIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Equipment Drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Outer Garment, Boots and Gloves Wash and Rinse	Scrub outer boots, outer gloves and splash suit with decontamination solution or detergent and water. Rinse off using copious amounts of water.
STATION 3	Outer Boot and Glove Removal	Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4	Canister or Mask Change	If worker leaves exclusive zone to change canister (or mask) and this is the last step in the decontamination procedure, worker's canister is exchanged, new outer gloves and boot covers are donned, and joints taped. Worker returns to duty.
STATION 5	Boot, Gloves and Outer Garment Removal	Boots, chemical-resistant splash suit, inner gloves are removed and deposited in separate containers lined with plastic.
STATION 6	Face Piece Removal	Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

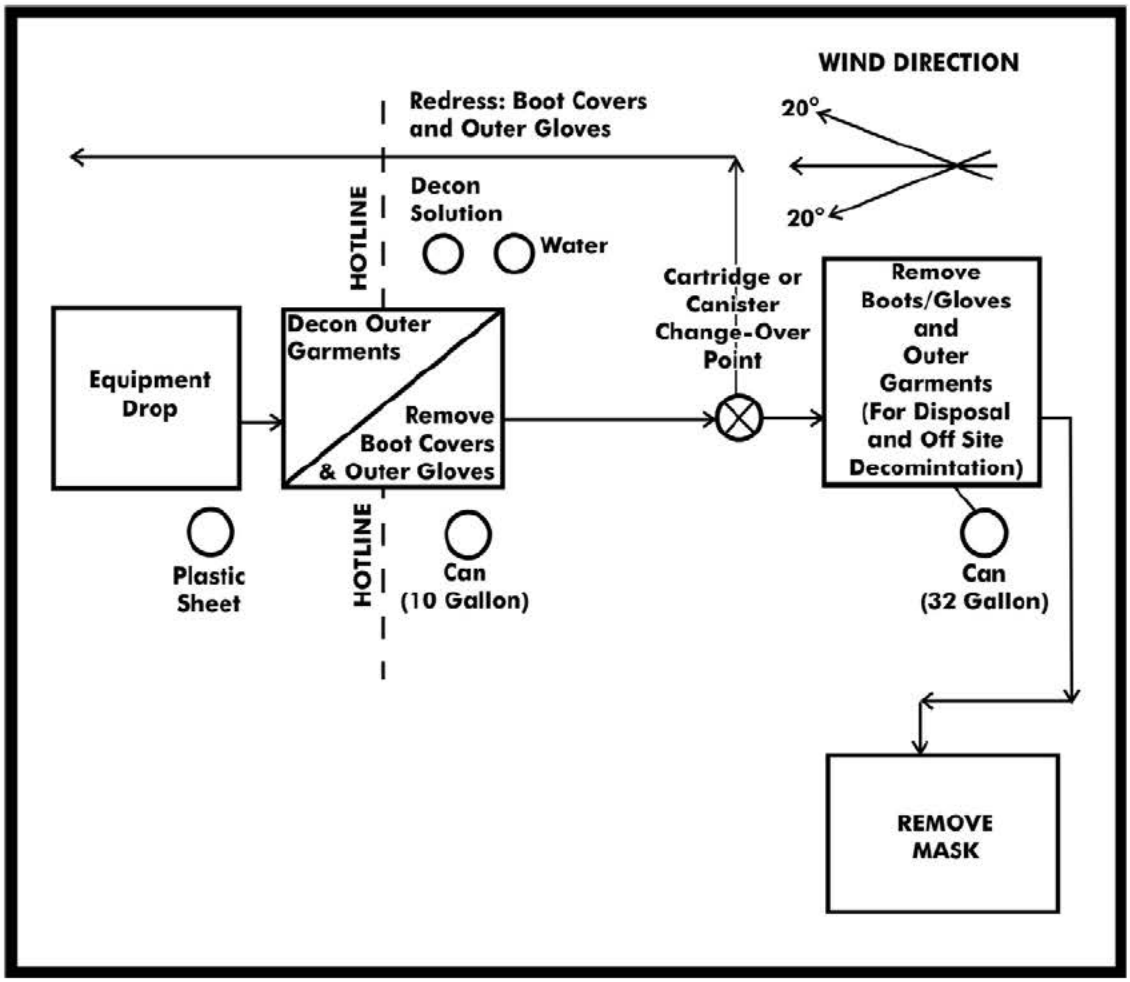
5.6 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MAXIMUM DECONTAMINATION LAYOUT



5.6 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MINIMUM DECONTAMINATION LAYOUT



5.7 DISPOSAL PLAN

Incident Disposal Plan

_____
(Incident Name)

Responsible Party: _____
Spilled Material: _____
Spill Volume (estimate): _____
Spill Location: _____
Spill Date/Time: _____
Report Update Time: _____

Disposal Plan Authorization
This plan is written at the request of the USCG and/or EPA, and the WDOE. The responsible party will recover the maximum feasible amount of oil spilled during the above named incident. In addition, an unknown quantity of oily waste debris (including plastics, sands, etc.) will be recovered. When disposing of this material, the responsible party will abide by all applicable state, local and federal laws and regulations. Disposed material will be tracked to provide and accurate means of estimating total oil recovered. Each section of this incident specific disposal plan addresses and corresponds with the waste disposal "Guideline" found in Section 9620 of the NWACP.

This plan may be amended as necessary to ensure compliance with all applicable laws and regulations. Amendment may occur only upon mutual agreement of the responsible party, the Federal OSC (USCG/EPA), and/or the State OSC (WDOE).

Submitted by: _____ Date: _____

Approved by WDOE: _____ Date: _____

Approved by USCG/EPA: _____ Date: _____

Approved by Responsible Party: _____ Date: _____

5.7 DISPOSAL PLAN, CONTINUED

Section I Waste Handlers

The following licensed transporters and approved treatment and disposal facilities are to be used for waste handling and disposition unless otherwise directed by Ecology. All waste handlers have read and are working in accordance with this plan.

Name of Company	Disposal Functions	Company Representative Signature

Section II Designation

The spilled material was deemed (non-) dangerous waste based on the following:

_____
_____
_____
_____
_____
_____

Section III Interim Storage, Segregation, And Tracking

A. Interim Storage of Solid Material

Interim Storage of sites will be located at:

_____
_____
_____

Provide a description of each site, lined roll-off boxes, etc. Describe how each site was constructed, bermed, covered, etc. to minimize infiltration of rainwater and prevent leaching.

_____
_____
_____
_____
_____
_____

5.7 DISPOSAL PLAN, CONTINUED

Describe measures that will be taken to return site(s) to their original condition.

Ecology's authorization

B. Segregation

Describe measures taken to ensure material recovered was properly segregated. Material recovered must be segregated in the following manner unless otherwise directed by the State or Federal OSC:

1. *Oil collected from sources other than state waters/shorelines (e.g. on vessels or pier).*
2. *Oil and oil/water mixtures recovered from state waters/shorelines*
3. *Oiled organic debris: wood, aquatic vegetaqtion…Oily debris should be placed in clear plastic bags for ease of identifying contents and segregation. To the extent possible efforts should be made to homogenize recovered organic debris e.g., heavily oiled eel grass should be kept separate from dissimilar debris.*
4. *Oiled sorbent material: oil snares, pads and booms*
5. *PPE and other typically non-sorbent materials*

5.7 DISPOSAL PLAN, CONTINUED

C. Washington State Oil Recovery Credit For Natural Resources Damages

Detail measures taken to ensure segregation as per oil spill recovery credit. See WDOE document "Compensation Schedule Credit for Oil Recovery, RDA Committee Resolution 96-1".

D. Tracking

Describe the waste tracking system used during this response. Include copies of waste tracking forms (see below).

E. Decanting

Decanting authorization form (if approved) should be attached.

Section IV Decontamination

Describe the areas designated for decontamination including location, set up, and pollution prevention measures.

Section V Animal Carcasses

If applicable describe the number of animal carcasses disposed of and methods used for their disposal.

5.7 DISPOSAL PLAN, CONTINUED

Section VI Waste Disposition and Final Disposal

ICS Form 209 Final Waste Status Summary

Type	Recovered	Stored	Disposed of
Oil (bbl)			
Oily Liquids (bbl)			
Oily Solids (tons)			
Solids (tons)			

Include copies of waste tracking forms for final disposal if used. Also include copies of receipts from disposal facilities.

A. Recoverable Oil

Oil recovered will be transported by _____ to _____.

Company names and Contacts

_____
_____
_____

B. Burnable Material

Burnable material includes oily wood, debris, PPE, sorbents, oil snares and other organic material collected during cleanup operations. The debris will be transported from the interim storage site by _____ to _____.

Transporter(s)	Facility
_____	_____
_____	_____
_____	_____
_____	_____

C. Other Material

This material may consist of sand and tar balls and other assorted material that has been collected from the cleanup effort and has been stored at interim storage sites. All of this material will be transported to a licensed facility.

Transporter(s)	Facility
_____	_____
_____	_____
_____	_____
_____	_____

5.7 DISPOSAL PLAN, CONTINUED

Final Disposal Tracking

Disposal Facility Location(s)	Received From Location(s)	Time Received	Volume (Gallons)	Type of Waste
Totals				

5.8 INCIDENT SECURITY PLAN

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

[redacted]

5.8 INCIDENT SECURITY PLAN, CONTINUED

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

[redacted]

5.9 ALTERNATIVE RESPONSE STRATEGIES

5.9.1 Alternative Strategies Checklist

EVALUATE ALTERNATIVE STRATEGIES (OIL SPILLS ONLY)	INITIALS	DATE & TIME STARTED	DATE & TIME COMPLETE
In-situ burning			
Flood and flush			
Bioremediation/Nutrient application			
Dispersants/Surfactants			
Gelling/Solidifying agents			
Sorbents			

5.9.2 In-Situ Burn Plan

1. GENERAL INFORMATION

- Incident Name: _____
- Date / Time of Incident: _____/_____am/pm
- Product Spilled: _____
- Quantity Spilled: _____
- API or Specific Gravity:_____ API / S.G. (circle one)
- MSDS Attached: Yes / No (circle one)

2. BURN SPECIFICS

- Area to be Burned: _____
- Total Area: _____acres / sq. ft. / sq. yds. / sq. miles (circle one)
  Map Attached: Yes / No (circle one)
- Property Owner: _____ Phone: _____
- Notified: Yes / No (circle one) If yes, Date: _____ Time: _____
- Comments: _____
- Fire Control and Containment Measures: _____
- Igniter: _____
- Quantity: _____
- Application Method: _____
- Ignition Method: _____
- MSDS Attached: Yes / No (circle one)

3. IMPACT ASSESSMENT

- Nearest Population Center: _____
  Distance and Direction: _____
  Local Authorities Notified: Yes / No (circle one).
  If yes, Date:_____ Time: _____
- Affected Environment (circle all applicable): Woodland/ Grassland / Wooded Swamp / Marsh / River / Stream / Open Water / Other (specify)_____
  Water Depth: _____
  Current Speed: Direction: _____
  Tide Forecast For Burn Time: _____
  Impacted Vegetation: _____
  Impacted Wildlife: _____
- Biologist/Botanist/Ecologist Consulted: Yes / No (circle one)
  If Yes, Name: _____ Date: _____ Time: _____
  Comments: _____
  _____

5.9.2 In-Situ Burn Plan, Continued

3. IMPACT ASSESSMENT, CONTINUED

- Monitoring to be Performed:
  Air Quality: _____ Frequency: _____
  Water Quality: _____ Frequency: _____
  Other: _____ Frequency: _____
- Weather
  Current: Wind Speed: _____ Direction: _____
  Air Temperature: _____ Water Temperature: _____
  Sea State: _____ Precipitation: _____
  Forecast: Wind Speed: _____ Direction: _____
  Air Temperature: _____ Water Temperature: _____
  Sea State: _____ Precipitation: _____

4. POST-BURN OPERATIONS

- Residue Recovery And Disposal: _____
  _____
- Long-Term Environmental Monitoring: _____
  _____

5. REVIEW AND APPROVAL

- Safety Plan Reviewed: Yes / No (circle one)
  If Yes, Date: _____ Time: _____
- Environmental Review: Yes / No (circle one)
  If Yes, Name: _____ Phone: _____ Date: _____ Time: _____
  Signatures:

Federal On-Scene Coordinator: _____ Date: _____

State On-Scene Coordinator: _____ Date: _____

Responsible Party: _____ Date: _____

5.9.3 Bioremediation Checklist

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

5.9.3 Bioremediation Checklist, Continued

NAME	PRODUCT 1	PRODUCT 2	PRODUCT 3
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:			

5.10 DEMOBILIZATION PLAN

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

Demobilization procedures:

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

SECTION 6
SENSITIVE AREAS / RESPONSE TACTICS

Last revised: 03/13/2014

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6.1 Area Description

6.1.1 Hydrographic and Climatic Conditions

6.1.2 Physical Geographic Features / Navigational Hazards

6.2 Spill Containment / Recovery

Figure 6.2-1 - Response Tactics for Various Shorelines

6.3 Sensitive Area Protection

6.3.1 Shoreline and Terrestrial Cleanup

Figure 6.3-1 - Sensitive Area Protection Implementation Sequence

Figure 6.3-2 - Shoreline Protection Methods

Figure 6.3-3 - Response Options for Oil

Figure 6.3-4 - Summary of Shoreline and Terrestrial Cleanup Techniques

6.3.2 Cleanup Technique Selection

Figure 6.3-5 - Shoreline Cleanup Technique Selection Guide

6.4 Alternative Response Strategies

6.4.1 Dispersants

6.4.2 Bioremediation

Figure 6.4-1 - Alternate Strategies Checklist

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

SECTION 6
SENSITIVE AREAS / RESPONSE TACTICS, CONTINUED

6.4.3 In-Situ Burning

Figure 6.4-3 - In-Situ Burn Decision Process

6.4.4 Decanting

6.5 Wildlife Protection and Rehabilitation

6.6 Endangered and Threatened Species

6.7 Vulnerability Analysis

6.8 Sensitivity Maps

6.9 Tactical Sites

6.1 AREA DESCRIPTION

Description of shoreline types and specific shoreline protection and clean-up techniques are presented in **SECTION 6.2** and **SECTION 6.3**. The strategies and response examples are guidelines and must be evaluated during the response to ensure that the selected response methods are appropriate for the situation. Site-specific maps and response tactics, sensitivity maps, and trajectory maps can be found in **SECTION 6.8**, **SECTION 6.9**, and **SECTION 6.10**.

Tidewater participated in the development of Geographic Response Plans (GRPs) for the Columbia, Snake and Willamette Rivers through committees comprised of state, federal and municipal agencies, private and commercial users. Water intake data, geographic information, and environmental issues collected by Geographic Response Plan Committees has been assembled and organized into area-specific Geographic Response Plans (GRPs). The GRPs will be used to assist in notification, containment, and recovery operations during spill response. The GRPs are contained in a separate volume at each of the response plan locations.

6.1.1 Hydrographic and Climatic Conditions

HYDROGRAPHIC AND CLIMATIC CONDITIONS	
Wind:	For Pasco, Washington area (Pasco Tri-Cities Airport): the mean average monthly wind speed ranges from approximately 4 to 10 mph. High wind speeds may exceed 65 mph in winter months and are typically lowest during the summer months when high wind speed may exceed 25 mph.
Temperature:	For Pasco, Washington area (Pasco Tri-Cities Airport): The median monthly temperature ranges from a low of approximately 34 degrees Fahrenheit during January to a high of approximately 76 degrees Fahrenheit during July. Temperature throughout the year typically ranges from highs exceeding 100 degree Fahrenheit during the summer to lows of 10 degrees Fahrenheit or less during the winter.
Tides and Currents:	River level is controlled by the Ice Harbor Dam located upriver on the Snake River and by the McNary Dam located downriver on the Columbia River. Water currents are approximately 1 to 3 mph and are influenced by wind and river level.
Local Visibility Problems:	For Pasco, Washington area (Pasco Tri-Cities Airport): the mean average visibility ranges from 8 to greater than 10 miles. Visibility during the winter months, between November and February, may be limited to 1/4 mile or less.

6.1.2 Physical Geographic Features / Navigational Hazards

PHYSICAL GEOGRAPHIC FEATURES / NAVIGATION HAZARDS	
Bathymetry:	Water depth at the SRT main dock ranges between 13.6 and 18 feet relative to minimum pool elevation (i.e., 335 feet NAD 83-91).
Beach Types:	Silt, sand, and gravel terraced beach.
Type of Soil and Terrain:	Soils in the area consist of thick fluvial (stream) and lacustrine (lake) deposits of silts, sand, and gravel underlain by basalt. The terminal is located on two terraces above and adjacent to the Snake River. The Petroleum Tank Farm, Fertilizer Tank Farm, and Chemical Facility are located on an upper terrace. The Lower Tank Farm occupies a lower terrace. With the exception of relatively steep slopes that connect the upper to the lower terrace and the lower terrace to the Snake River, both terraces are essentially flat.
Buoys, Moorings or other Underwater Structures:	Snake River Terminal main dock, Tesoro Terminal dock, Snake River Railroad Bridge, Highway 12 Bridge, Snake River Buoy.
Navigational Hazards:	Potential shallow area at the main dock and tie off areas when the pool elevation is below 337.5 feet. No petroleum barges can enter the Snake River unless the river gauge is 337.6 feet or greater. For every inch below 337.6 feet, the barge draft must be less the same in inches; Snake River Railroad Bridge; Highway 12 Bridge; Strawberry Island and associated berms
Traffic Patterns:	Barge traffic transits upriver and downriver in a navigational channel. The river bifurcates at Strawberry Island with the navigational channel located southeast of the island.

6.2 SPILL CONTAINMENT / RECOVERY

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

Shoreline protection procedures are conducted to prevent oil impact to shoreline and reduce the impact on wildlife. Mechanical methods, such as use of boom and skimmers are the preferred methods. These methods can be used to control or contain floating oil slicks on the water away from marshes. Sorbents are effective on mudflats when placed on the shoreline before oil contacts the shore. A description of shoreline types is presented in **FIGURE 6.2-1**.

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

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

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

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

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

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

6.2 SPILL CONTAINMENT / RECOVERY, CONTINUED

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

6.2 SPILL CONTAINMENT / RECOVERY, CONTINUED

Sorbent Booming

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

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

Recovery/containment techniques may require a verbal emergency Hydraulic Project Approval from the Washington Department of Fish and Wildlife. Verbal approval can be issued over the phone at the time of the emergency by calling 360-534-8233 (24-hour pager number) and entering your call-back number.

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

FIGURE 6.2-1 - RESPONSE TACTICS FOR VARIOUS SHORELINES

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY

Developed/ Unforested Land	• This class includes towns, cities, farms, pastures, fields, reclaimed wetlands, and other altered areas
	• Organisms and algae may be common in riprap structures and on pilings
		• Oil would percolate easily between the gravel and boulders of riprap structures
		• Oil would coat the intertidal areas of solid structures
		• Biota would be damaged or killed under heavy accumulations
			• May require high pressure spraying:
			  • To remove oil
			  • To prepare substrate for recolonization of barnacle and oyster communities
			  • For aesthetic reasons

Freshwater Flat	• Mud or organic deposits located along the shore or in shallow portions of nontidal freshwater lakes and ponds • They are exposed to low wave and current energy • They are often areas of heavy bird use	• Oil is expected to be deposited along the shoreline • Penetration of spilled oil into the water-saturated sediments of the flat will not occur • When sediments are contaminated, oil may persist for years	• These areas require high priority for protection against oil contamination • Cleanup of freshwater flats is nearly impossible because of soft substrate • Cleanup is usually not even considered because of the likelihood of mixing oil deeper into the sediments during the cleanup effort • Passive efforts, such as sorbent boom can be used to retain oil as it is naturally removed

Fresh Marsh	• Found along freshwater ponds and lakes
	• These marshes have various types of vegetative cover, including floating aquatic mats, vascular submerged vegetation, needle and broad-leaved deciduous scrubs and shrubs, and broad-leaved evergreen scrubs and shrubs
	• Birds and mammals extensively use fresh marshes for feeding and breeding purposes
		• Small amounts of oil will contaminate the outer marsh fringe only; natural removal by wave action can occur within months
		• Large spills will cover more area and may persist for decades
		• Oil, particularly the heavy fuel oils, tends to adhere readily to marsh grasses
			• Marshes require the highest priority for shoreline protection
			• Natural recovery is recommended when:
			  • A small extent of marsh is affected
			  • A small amount of oil impacts the marsh fringe
			• The preferred cleanup method is a combination of low-pressure flushing, sorption, and vacuum pumping performed from boats
			• Any cleanup activities should be supervised closely to avoid excessive disturbances of the marsh surface or roots
			• Oil wrack and other debris may be removed by hand

Swamp	• Swamps are freshwater wetlands having varying water depths with vegetation types ranging from shrubs and scrubs to poorly drained forested wetlands. Major vegetative types include: scrubs, shrubs, evergreen trees, and hardwood forested woodlands • Birds and mammals use swamps during feeding and breeding activities	• Even small amounts of spilled oil can spread through the swamp • Large spills will cover more area and may persist for decades since water-flushing rates are low • Oil, particularly the heavy fuel oils, will adhere to swamp vegetation • Unlike mangroves, the roots of swamp forest trees are not exposed; thus, little damage to trees is expected. Any underbrush vegetation, however, would be severely impacted	• No cleanup recommended under light conditions • Under moderate to heavy accumulations, to prevent chronic oil pollution of surrounding areas placement of sorbent along fringe swamp forest (to absorb oil as it is slowly released) may be effective under close scientific supervision • Proper strategic boom placement may be highly effective in trapping large quantities of oil, thus reducing oil impact to interior swamp forests • Oil trapped by boom can be reclaimed through the use of skimmers and vacuums

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Open Water	• Have ocean-like waves and currents • Weather changes effect on-water conditions • River mouths present problems • Thermal stratification occurs	• Most organisms are mobile enough to move out of the spill area • Aquatic birds are vulnerable to oiling • Human usage (such as transportation, water intakes, and recreational activities) may be restricted	• Booming, skimming, vacuuming, and natural recovery are the preferred cleanup methods • Should not use sorbents, containment booming, skimming, and vacuuming on gasoline spills • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Large Rivers	• May have varying salinities, meandering channels, and high flow rates • May include manmade structures (such as dams and locks) • Water levels vary seasonally • Floods generate high suspended sediment and debris loads	• Fish and migratory birds are of great concern • Under flood conditions, may impact highly sensitive areas in floodplains • Human usage may be high • When sediments are contaminated, oil may persist for years	• Booming, skimming, and vacuuming are the preferred cleanup methods • Should not use sorbents, containment booming, skimming, and vacuuming on gasoline spills • Cleanup options include natural recovery, physical herding, sorbents, and debris/vegetation removal
Small Lakes and Ponds	• Water surface can be choppy • Water levels can fluctuate widely • May completely freeze in winter • Bottom sediments near the shore can be soft and muddy • Surrounding area may include wet meadows and marshes	• Wildlife and socioeconomic areas likely to be impacted • Wind will control the oil's distribution	• Booming, skimming, vacuuming, and sorbents are the preferred cleanup methods • Should not use containment booming, vacuuming, sorbents, and skimming on gasoline spills • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Small Rivers and Streams	• Wide range of water bodies - fast flowing streams to slow moving bayous with low muddy banks and fringed with vegetation • May include waterfalls, rapids, log jams, mid-channel bars, and islands • Weathering rates may be slower because spreading and evaporation are restricted	• Usually contaminate both banks and the water column, exposing a large number of biota to being oiled • Water intakes for drinking water, irrigation, and industrial use likely to be impacted	• Booming, skimming, vacuuming, sorbents, barriers, and berms are the preferred cleanup methods • Should not use containment booming, sorbents, vacuuming, and skimming on gasoline spills • Cleanup options include physical herding, natural recovery, debris removal, vegetation removal, and in-situ burn
Exposed Rocky Cliffs	• The intertidal zone is steep (greater than a 30° slope), with very little width. • Sediment accumulations are uncommon and usually ephemeral, 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 be where heavy concentrations of light refined poduct (e.g., No. 2 Fuel Oil) came ashore very quickly.	• Cleanup is not usually required. • Access can be difficult and dangerous.

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY

Exposed Sea Walls and Piers	• 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, woodlen, or metal bulkheads and wooden pilings.
		• Oil would percolate between the joitns 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 Platforms	• The intertidal zone consists of a flat rock bench of highly variable width. • The shoreline may be baked 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 teach 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.
Fine/Medium-Grained Sandy Beaches	• 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 area scarce.	• Light 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 preventin gthe mixture of oil being pushed deepr into the sediments by vehicle and foot traffic.

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Coarse-Grained Sand/Gravel Beaches	• 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 possible 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.
Mixed Sand and Gravel Beaches	• 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 intermittenUy 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 midtide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Gravel Beaches	• 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 likely on exposed beaches. • On exposed beaches, oil can be pushed over the high-tide and storm berms, pooling and persisting above the normal zone of wave wash. • Long-term persistence will be controlled by the depth of penetration versus the depth of routine reworking by storm waves. • On relatively sheltered beaches, formation of asphalt pavements is likely 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 midtide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.
Rip Rap	• Rip rap structures are composed of cobble to boulder-size rocks. • Rip rap structures are placed for shoreline protection and inlet stabilization. • Biota on the rip rap may be plentiful and varied.	• On rip rap structures, deep penetration of oil between boulders is likely. • 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 rip rap and replace it.
Exposed Tidal Flats	• 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 possible 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 feasible.

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Sheltered Rocky Shores	• 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 s1tes 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.
Sheltered Tidal Flats	• 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 falling 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.

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

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Fringing and Extensive Salt Marshes	• 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 must not mix the oil deeper into the sediments. Trampling of the roots must be minimized. • Cutting of oiled vegetation should only be considered when other resources present are at great risk from leaving the oiled vegetation in place.

6.3 SENSITIVE AREA PROTECTION

Protection refers to the implementation of techniques or methods to prevent oil from making contact with a shoreline or aquatic area that is determined to be sensitive for environmental, economic, cultural, or human use reasons. Implementation of sensitive area protection techniques must consider a number of factors, such as sensitive features, priorities for areas to be protected, and potential degree of impact.

In the event a product spill reaches a major area waterway, it may be necessary to protect downstream sensitive areas if it appears that local containment and recovery efforts will not be sufficient to control the entire spill. Major waterways and specific sensitive areas located downstream of the pipeline are provided in **SECTION 6.8**.

Specific shoreline protection and cleanup measures, for areas possibly impacted by a potential spill, are discussed in this subsection. **FIGURE 6.3-2** provides information on shoreline protection methods. **FIGURE 6.3-4** lists various response options available for different shoreline environments. Additional information may be obtained from the Northwest Area Contingency Plan.

6.3.1 Shoreline and Terrestrial Cleanup

In the event that terrestrial areas do become oiled, cleanup operations should be undertaken to minimize 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.

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 does permit, consider the following items in detail:

- Documentation of the location, degree, and/or extent of oil conditions,
- Evaluation of all environmental, cultural, economic, and political factors,
- Selection of optional cleanup technique,
- Mitigation of physical/environmental damage associated with cleanup operations,
- Cost effectiveness,
- Net environmental benefit assessment.

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 candidate techniques,
- Shoreline accessibility,
- Exposure.

Therefore, before initiating cleanup activities, an assessment of the net environmental benefits of a proposed cleanup operation should be performed for all affected shorelines. Several shoreline and terrestrial cleanup techniques have been developed that include both intrusive and non intrusive methods. A summary of these techniques is included in **FIGURE 6.3-4** and **FIGURE 6.3-5**.

FIGURE 6.3-1 - SENSITIVE AREA PROTECTION IMPLEMENTATION SEQUENCE

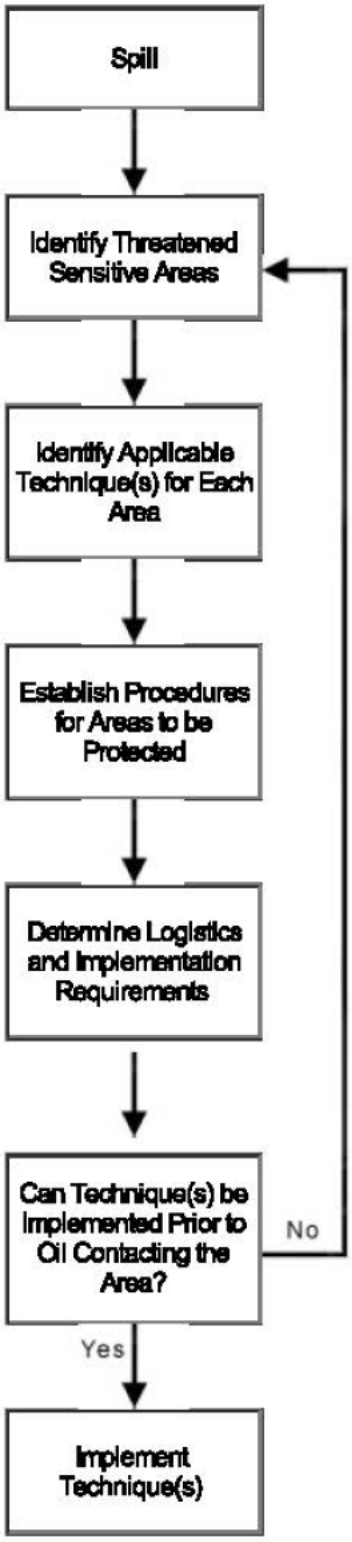


FIGURE 6.3-2 - SHORELINE PROTECTION METHODS

ON-WATER	METHOD	APPLICABILITY
EXCLUSION BOOMING	Deployed across or around oil Oil removed from water surface	To protect small bays, harbors, inlets or river mouths Currents less than 0.5 m/s
DIVERSION BOOMING	Deployed at an angle to approaching oil Diverts oil away from sensitive areas	Where currents are greater than 0.5 m/s
CONTAINMENT BOOMING	Deployed around oil Oil removed from water surface	To protect small bays, harbors, inlets or river mouths Currents less than 0.5 m/s
SORBENT BOOMING	Deployed across approaching oil Oil absorbed by boom	Quiet waters Can be recycled and reused Small slicks
DISPERSION AGENTS	Reduce surface tension of oil by application of chemicals Oil is then dispersed more rapidly into the water	Requires permission of regulatory agencies Increases oil mobility, therefore, stranded oil has greater potential to penetrate beach sediments
COLLECTION AGENTS	Increase surface tension of oil by application of chemicals Oil is prevented from spreading	Decreases oil mobility, therefore, stranded oil has a reduced capacity to penetrate beach sediments
ONSHORE	**METHOD**	**APPLICABILITY**
SORBENTS	Applied manually or mechanically to the beach before oil is stranded Oil/sorbent is then removed manually or mechanically	Prevents penetration of oil into substrate Sorbent pads preferable to loose-fiber materials for ease of collection Synthetic products have higher absorption capacity than natural materials Can be recycled and reused Usually a labor-intensive method
SURFACE TREATMENT AGENTS	Applied to shore zone before oil is stranded Prevents oil from adhering to the substrate	Applicability and effectiveness not yet fully assessed May be difficult to apply on long sections of shore Oil must be flushed from the shore and agent removed if it does not degrade naturally
COLLECTION AGENTS	Applied along water line before oil is stranded Reduces natural dispersion of oil	Reduces area of shoreline contamination Reduces penetration into beach
DIKES AND/OR DITCHES	Ditch up to 1.0 m deep dug parallel to shore at upper limit of wave action Sediment removed used to build dike on landward side of the ditch On pebble-cobble beaches can fill ditch with sorbents to collect oil and prevent oil penetration	Prevents oil being washed onto the backshore Can be constructed mechanically along long beach sections Ditch acts as a collector of oil which can be removed with buckets, hand pumps, or vacuum pumps
DAMS	Used for shallow streams where booms cannot be deployed	Acts as a boom for exclusion of oil Can be constructed to allow water to flow through dam
VISCOUS	Applied manually to the beach, rock jetties, etc.	Excellent with heavier oils Can be recycled and reused Reduces penetration into rocks

* Breuel, A. 1981. Oil Spill Cleanup and Protection Techniques for Shoreline and Marshland and Marshlands. Park Ridge, New Jersey, Noyes.

FIGURE 6.3-3 - RESPONSE OPTIONS FOR OIL

	Protection					Cleaning/Mixing				Removal/Disposal				Onshore Dispersion				
	Ditches/dikes	Dispersants on water	Sinking Agents	Herding/Gelling Agents	Booms/Skimmers	Brach Cleaning Machines	Burning	Mixing	Natural Cleaning	Manual Removal	Mechanical Removal	Vacuum Pumping	Vegetation Cropping	Dispersants on Cropping	High Pressure Flushing	Low Pressure Flushing	Sand Blasting	Steam Cleaning
1. SEA GRASS BEDS		x	#	o	■				■	x			x	x		o		
2. MANGROVES		■		o	■		#		o	o	#	o	x	■	x	■		
3. MARSHES				o	■		#		■	#	#	o	x	o	#	■		#
4. SHELTERED TIDAL FLATS				o	■			#	■	o	#	o		x	#	■		
5. RIVER BANKS	o			o	■		x		■	■	o	o				o		
6. OYSTER REEFS				o	■				■			o		x		o		#
7. EXPOSED TIDAL FLATS	o	x		o	■				■					x				
8. DREDGE SPOIL BANKS	o			o	■			o	■	o	o							
9. BAY MARGINS	o			o	■	o		o	■	o	o	■				o		
10. OPEN SAND BEACH	■			o		■	#	o	■	■	■	■		o	#	o		
11. MAN-MADE SHORE				o	■		x		■	o				o	o	o	o	o
12. EROSION SCARPS									■	■	x	■			x	o		
TIDAL INLETS		o		o	■				■									
LAGOONS BAYS			#	o	■				■		o							

KEY: ■ PREFERRED o OPTIONAL x NOT ADVISABLE # AVOID

PHMSA 000089244

FIGURE 6.3-4 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES

TECHNIQUE	DESCRIPTION	PRIMARY LOGISTICAL REQUIREMENTS[1]	USE LIMITATIONS[2]	POTENTIAL ENVIRONMENTAL EFFECTS
Removal				
1. Manual Removal	Hand tool (scrapers, wire brushes, shovels, cutting tools, wheel barrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/or access is limited.	Equipment misc. hand tools Personnel 10-20 workers	• 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 6 to 12 inches of sediments • Removes shallow organisms but ecolonization 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
4. Vacuum/Pumps/ Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	Equipment 1-2 50- to 100-bbl vacuum trucks w/hoses 1-2 nozzle screens or skimmer heads Personnel 2-6 workers plus truck operators	• Poor access • Thin oil accumulations or oil sheens • Highly sensitive shoreline areas • Excessive suction lift required	• Typically does not remove all oil • Can remove some surface organisms, sediments, and vegetation

FIGURE 6.3-4 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

TECHNIQUE	DESCRIPTION	PRIMARY LOGISTICAL REQUIREMENTS[1]	USE LIMITATIONS[2]	POTENTIAL ENVIRONMENTAL EFFECTS
Washing				
5. Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered. Frequently used with flushing.	Equipment 1-5 100- to 200-gpm pumping systems 1 100-ft perforated header hose per system 1-2 200-ft containment booms per system 1 oil recovery device per systems 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
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- to 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

FIGURE 6.3-4 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

TECHNIQUE	DESCRIPTION	PRIMARY LOGISTICAL REQUIREMENTS[1]	USE LIMITATIONS[2]	POTENTIAL ENVIRONMENTAL EFFECTS
In Situ, Continued				
9. Sediment Tilling	Mechanical equipment or hand tools are used to till lightly to moderately oiled surface sediments to maximize natural degradation processes.	Equipment 1 tractor fitted with tines, dicer, ripper blades, etc. or 1-4 rototillers or 1 set of hand tools Personnel 2-10 workers	• 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 to moderately oiled areas to enhance microbial growth and subsequent biodegradation of oil.	Equipment 1-2 fertilizer applicators 1 tilling device if required Personnel 2-4 workers	• 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
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 1000 feet of shoreline or oiled area. Potential sources of equipment are provided in **SECTION 5.**
2 - In addition to fire and explosion hazard.

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

FIGURE 6.3-4 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

Note: The appropriate government agencies must be consulted prior to implementing shoreline clean-up techniques.

Type of Surface Containing Spill	Recommended Clean-Up Techniques	Actions to Avoid
Sand	Use vacuum skimmer and sorbents to clean up pools of free flowing oil. Use shovels to remove and place oiled sand into plastic bags or 55 gallon drums.	Do not let people or equipment travel over oiled sand. Do not bury oil sand.
Pebble or Gravel	If heavily oiled, use water spray and front-end loader to remove oiled material. If lightly oiled, use water spray and detergents to wash oil films off gravel and pebbles.	Do not place oiled gravel or pebbles in streams or offshore areas.
Snow	Use shovels to place oiled snow in 55 gallon drums.	Do not place oiled snow in wetlands or offshore areas. Make sure that drums do not have holes in them.
Concrete or Asphalt	Use vacuum skimmers and sorbents to clean up oil. Wash surface with water. Remove oil between cracks.	
Wetlands	Consult DOE, EPA, or other agencies for permits to work on wetlands. If cleanup will cause excessive damage to wetlands, request agency approval to leave oil in place.	Do not operate vehicles or heavy equipment on wetlands. Do not disturb nesting areas.
Marshes	Use booms to control oil movement. Use a low pressure water spray to herd oil to areas where it can be recovered with skimmers and sorbents. Seek agency input as to whether oil should be left in place to prevent environmental damage that could result from clean-up operation.	Do not block entrance to marsh with berms or dams. Do not use heavy equipment.
Harbors and Streams	Use booms to prevent oil from spreading. Use skimmers to clean up oil slicks.	Avoid creating waves which may cause oil to spread. Do not use dispersants or chemicals to remove oil from water surface.

6.3.2 CLEANUP TECHNIQUE SELECTION

Shoreline

In the event the techniques recommended above do not apply to a particular spill situation at the Facility, 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.

Therefore, the following guidelines can be used to identify the most appropriate cleanup technique(s) for that situation.

The selection of an appropriate shoreline cleanup technique is primarily dependent on the following factors:

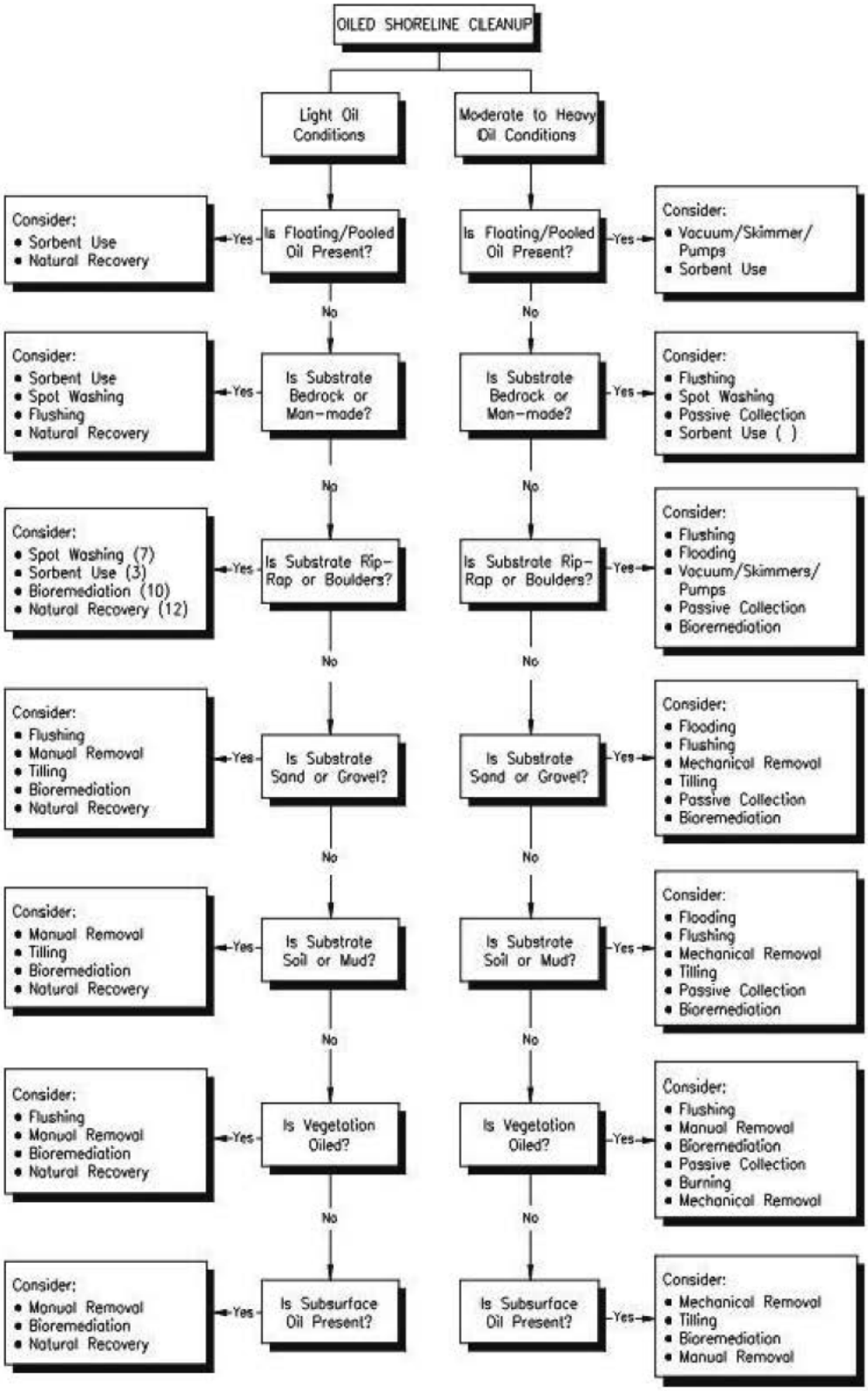
- **Substrate type** - Finer grained sediments typically require different techniques than coarse grained sediments and sediment type can affect trafficability (i.e., ability to traverse the area without losing traction) for heavy equipment.
- **Oil conditions** - Heavier oil conditions and larger areas 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.

FIGURE 6.3-5 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.

FIGURE 6.3-5 - SHORELINE CLEANUP TECHNIQUE SELECTION GUIDE



6.4 ALTERNATIVE RESPONSE STRATEGIES

While 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 to 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. A checklist for evaluating different alternate strategies is present in **FIGURE 6.4-1**.

As required by Section 300.905 of the NCP, in order for a FOSC to authorize the use of a dispersing, surface washing, surface collecting or bioremediation agent, it must be listed on the NCP Product Schedule. Burning agents are not listed on the NCP Product Schedule. The U.S. EPA maintains the NCP Product Schedule and it can be found at http://http://www.epa.gov/osweroe1/content/ncp/.

6.4.1 Dispersants

Dispersants - Applying chemical agents, usually by aircraft, to aid in breaking up surface slicks and dispursing oil within the water column. (See Section 4610 of the NWAC for more policy on dispersant use.)

Areas within the Region X RRT and Northwest Area Committee area of responsibility fall into three different zones with respect to dispersant use: a pre-approval zone, case-by-case approval zones, or no dispersant use zones (See NWAC Section 4610 "Region X RRT Dispersant Use Zones Summary Table").

Within a designated pre-approval zone, the FOSC may authorize the use of dispersants without further concurrence or consultation with the RRT. The FOSC will determine whether to authorize the use of dispersants through the information gathering and decision-making process outlined in the "FOSC Dispersant Authorization Checklist" (NWACP Section 4611).

The Dispersant **Pre-Approval Zone** is as follows:

- Marine waters three to 200 nautical miles from the coastline or an island shoreline except for waters designated as a part of a National Marine Sanctuary and the Makah Tribe Usual and Accustom marine area or waters within three miles of the border of the Country of Canada, the State of California, or the Makah Tribe Usual and Accustom marine area.

The Dispersant **Case-by-Case Approval Zones** are as follows:

- All marine waters that are both within three nautical miles from the coastline or an island shoreline and greater than 10 fathoms (60 feet) in depth.
- Waters designated as a part of a National Marine Sanctuary and waters that are part of the Makah Tribe Usual and Accustom marine area which are also greater than 10 fathoms (60 feet) in depth.
- Waters of the Strait of Juan de Fuca and North Puget Sound from Point Wilson to Admiralty Head and north, and greater than 10 fathoms (60 feet) in depth.
- Marine waters within three miles of the borders of the State of California, Makah Tribe Usual and Accustom marine area, and the country of Canada. In considering the use of dispersants within three miles of border of State of California, the Region X RRT will consult with the Region IX RRT. In consideration of the use of dispersants within three miles of the Makah Tribe Usual and Accustom marine area, the Region X RRT will consult with the Makah Tribal government. In considering the use of dispersants within three miles of the International border with Canada, the Region X RRT will consult with the Joint Coastal Pollution Response Team (Coastal JRT) comprised of representatives of the U.S. and Canadian governments.

6.4.1 Dispersants, Continued

The Dispersant **No Dispersant Use Zones** are as follows:

- 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.
- Marine waters south of a line drawn between Point Wilson (48º 08' 41" N, 122º 45' 19" W) and Admiralty Head (48° 09' 20" N, 122° 40' 70" W).
- Freshwater environments.

The Northwest Area Contingency Plan Checklist for gathering dispersant use information is provided in **SECTION 5**.

Tidewater is not under pre-approval for dispersant use and is intent to not use dispersants unless directed by the Unified Command.

6.4.2 Bioremediation

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

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

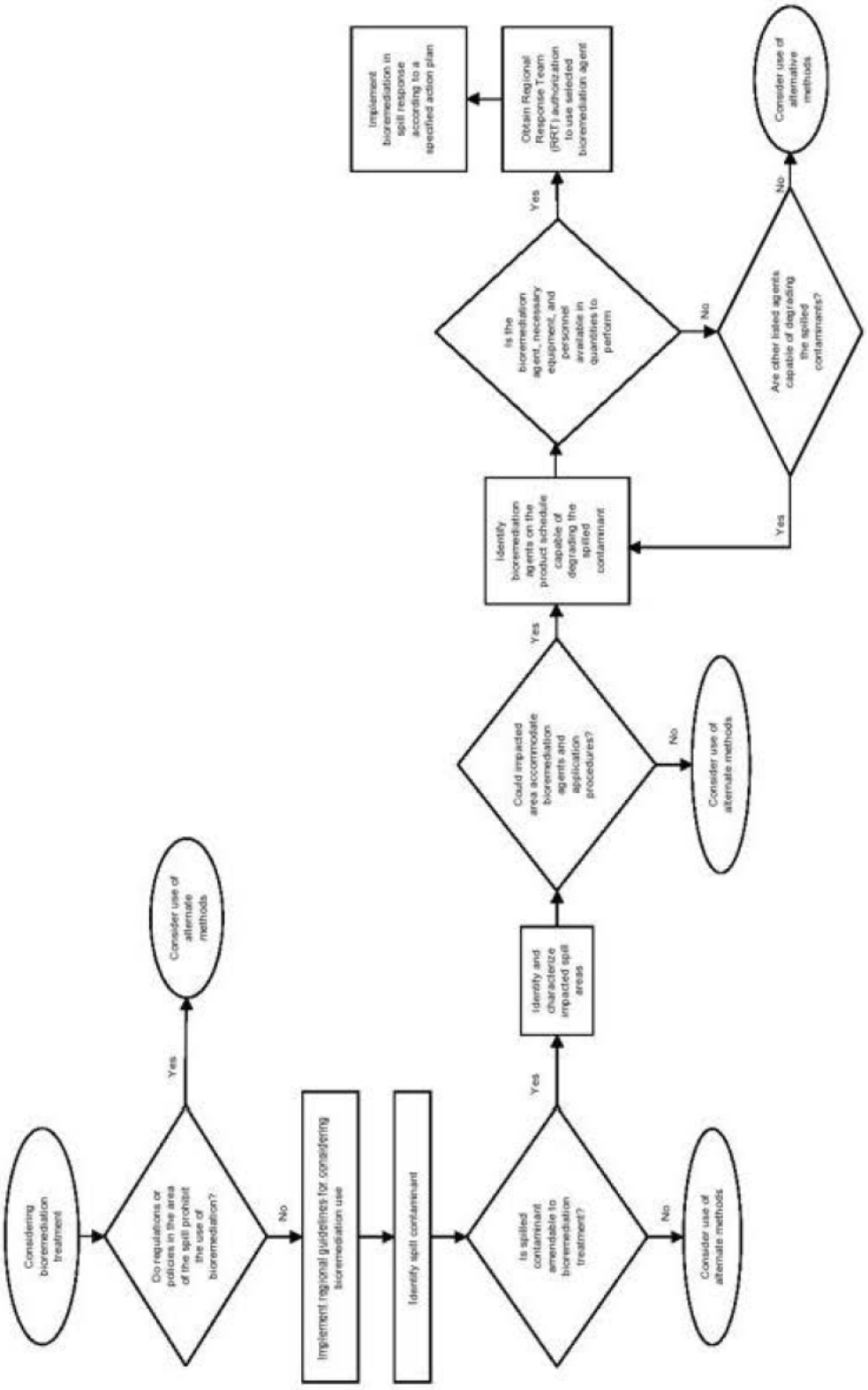
Although nutrient-enhanced bioremediation techniques have been used extensively for landfarming and groundwater application, their use in oil spills has been limited until the relatively recent *Exxon Valdez* (1989) and *Mega Borg* (1990) spills in Prince William Sound, Alaska and the Gulf of Mexico, respectively. Historically, bioremediation has been given little attention as it has been viewed as a slow process requiring months or years to reach cleanup objectives.

There are, however, instances on open seas or shorelines where standard recovery or cleanup techniques are not practical or will result in significant environmental or physical impacts. In these cases, bioremediation may be a viable response option and should be considered for use. **FIGURE 6.4-2** provides a federal decision guide for bioremediation consideration. A Bioremediation Plan is provided in **SECTION 5**.

FIGURE 6.4-1 - ALTERNATE STRATEGIES CHECKLIST

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

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



6.4.3 In-Situ Burning

Use of In-Situ Burning in the Northwest-Philosophy

Under the circumstances specified in this section, it is the policy of the Northwest Area Committee to use, and in certain cases, encourage in situ burning in the Northwest. 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, those responsible for directing the response, who must determine that an application to burn conforms with these guidelines. The decision to burn or not burn must be made expeditiously.

Pre-approval areas are defined as those areas which are more than three miles from population. 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 ($\mu g/m^3$) of air averaged over one hour. The concentrations should never exceed 150 $\mu g/m^3$ averaged over 24 hours.

Authorization Procedures

These guidelines provide a common decision-making process to evaluate the appropriateness of using in situ burning during a spill response. The process is based on the premise that a rapid decision is essential if in situ burning is ever to be used since oil emulsifies (becomes mixed with water) and is more difficult to ignite as time goes on. Therefore, the fewest number of decision-makers as possible are involved in deciding whether or not to burn.

Under these guidelines, authorization to use in situ burning rests with the Unified Command (UC). The UC consists of federal, state, and responsible party on-scene coordinators as well as local and tribal on-scene coordinators, as appropriate. The UC, as part of the Incident Command System (ICS), is responsible for overseeing the entire response effort, which includes the decision to use in situ burning. The decision process is greatly expedited by the use of the unified command structure, by the establishment of a single application (i.e. review checklist), and mutually agreed upon operational controls. A detailed description of the incident command system and unified command can be found in Section 2.2.4 of the Northwest Area Contingency Plan. **FIGURE 6.4-3** depicts the in-situ burn decision process.

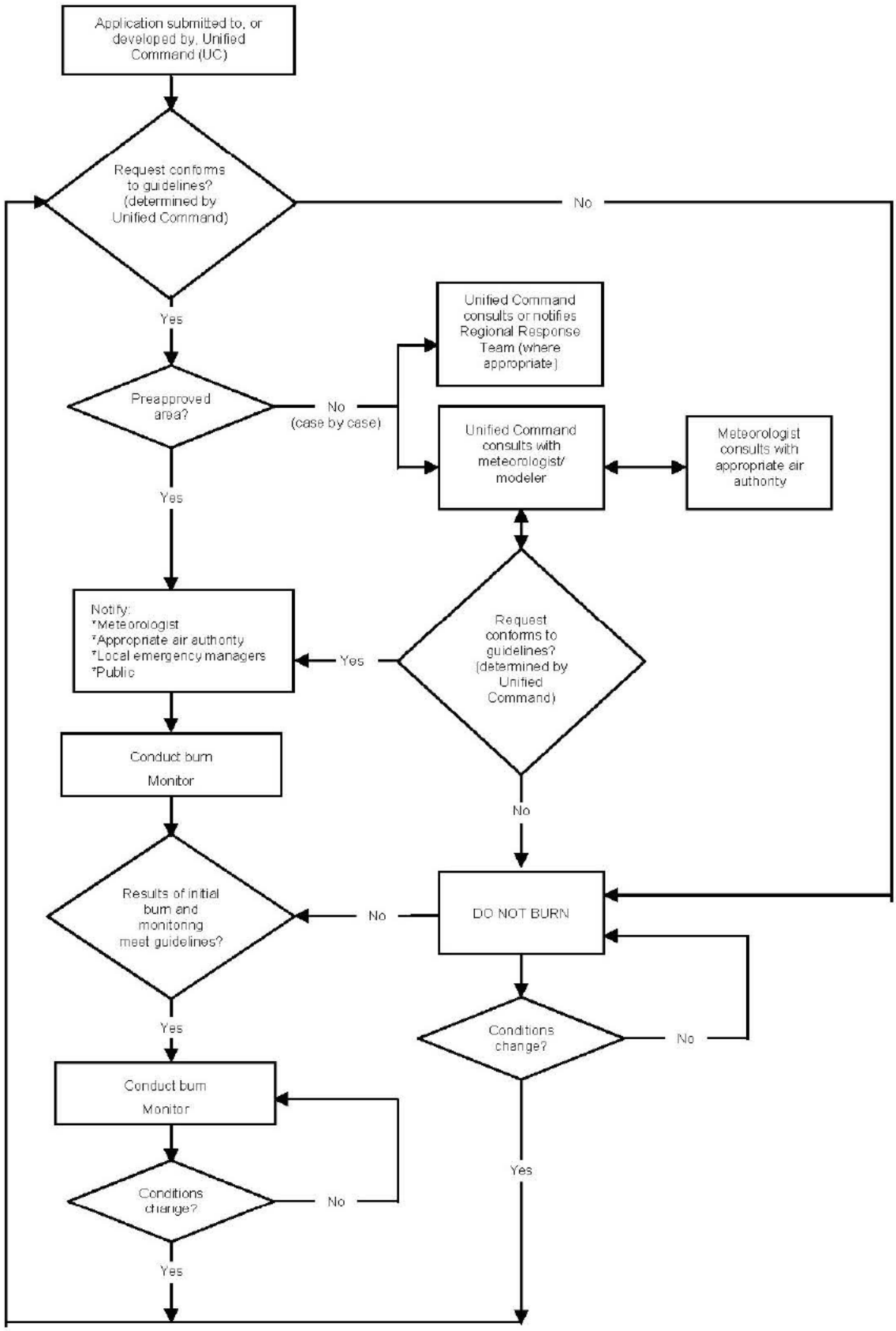
Authorization procedures will differ depending upon whether the spill location is in a pre-approval area or is decided on a case-by-case basis. Regardless of location, the UC directs actions that will provide for maximum environmental protection while ensuring human safety. **SECTION 5** provides checklists to determine if in-situ burning is an appropriate method.

Once the UC determines that the application to burn conforms to the PM-10 standard, then the UC determines if the spill location is in a "pre-approval area." Pre-approval areas include any area that is further than three miles from human population. Human population is defined as 100 people per square mile. If a potential burn site is in a pre-approval area, then the meteorologist, appropriate air pollution control authority, local emergency manager and the public are notified. Preparations will be made for monitoring the burn immediately following notification. *(Note: Pre-approval refers to certain locations where burning is allowed with minimal steps to be taken to conduct the burn. Several prior procedures must still be under taken, including application submittal and approval, and notifications.)*

6.4.3 In-Situ Burning, Continued

If the UC determines that the application conforms with the guidelines but is not in a pre-approval area, then approval to burn is considered on a case-by-case basis. The UC notifies the Regional Response Team (RRT). Incases where the RRT's expertise is needed, then the RRT will be consulted. At this stage, the UC consults with the meteorologist to obtain weather data and information on the potential concentrations of pollutants that may reach a populated area from both burned and unburned oil. The meteorologist consults with the appropriate air pollution control authority for more information. Data will also be obtained from a predictive smoke plume model whenever possible. Modeling information will not be relied upon exclusively but considered as part of the information package. The UC then evaluates all available information and determines the feasibility and acceptability of in situ burning based on these guidelines. If the decision is yes, then the same procedures apply as those for pre-approval areas. If the decision is no, then the burn will not be conducted. If conditions change, the application will be re-evaluated. Tidewater is not under pre-approval for in-situ burning and is intent to not consider in-situ burning unless directed by the Unified Command.

FIGURE 6.4-3 - IN-SITU BURN DECISION PROCESS



6.4.4 Decanting

When oil is spilled on the water, mechanical recovery of the oil is the principal approved method of responding. However, the mechanical recovery process and associated systems necessarily involve placing vessels and machinery in a floating oil environment. Incidental returns of oil into the response area, such as oil that falls back into the recovery area from vessels and machinery that are immersed and working in the oil, are an inevitable part of the mechanical recovery process. Similarly, separation or "decanting" of water from recovered oil and return of excess water into the response area can be vital to the efficient mechanical recovery of spilled oil because it allows maximum use of limited storage capacity, thereby increasing recovery operations. This practice is currently recognized as a necessary and routine part of response operations that is appropriately addressed in Area Contingency Plans. (See National Contingency Plan Revisions, 59 F.R. 47401, Sept. 15,1994.) In addition, some activities, such as those associated with oil recovery vessels, small boats and equipment cleaning operations, may result in incidental discharges. These activities may be necessary to facilitate response operations on a continuing basis, and all of these activities are considered to be "incidental discharges."

Criteria

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, collection 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.

The overriding goal of mechanical recovery is the expeditious recovery of oil from water. In many cases, the separation of oil and water and discharge of excess water is necessary for skimming operations to be effective in maximizing the amount of oil recovered and in minimizing overall environmental damages. Such actions should be considered and in appropriate circumstances authorized by the FOSC and/or SOSC because the discharged water will be much less harmful to the environment than allowing the oil to remain on the water and be subject to spreading and weathering.

During a response, it will likely be necessary for response contractors or a responsible party to request from the FOSC and/or SOSC authority to decant while recovering oil so that response operations do not cease or become impaired. Expeditious review and approval, as appropriate, of such requests is necessary to ensure a rapid and efficient recovery operation. In addition, such incidental discharges associated with mechanical recovery operations should not be considered prohibited discharges. Therefore, the Area Committee adopts this policy to provide for an expeditious approval process and provide guidance to OSCs, responsible parties, response contractors and other members of the spill response community relating to incidental discharges and decanting.

The Federal and State OSCs will consider each request for decanting on a case by case basis. Prior to approving decanting, the OSCs should evaluate the potential effects of weather, including the wind and wave conditions, the quantity of oil spilled and the type of oil as well as available storage receptacles The OSC should also take into account that recovery operations as enhanced by decanting will actually reduce the over all quantity of pollutants in a more timely and effective manner to facilitate cleanup operations.

6.4.4 Decanting, Continued

The following criteria should be considered by the FOSC and/or SOSC in determining whether to approve decanting unless circumstances dictate otherwise:

- 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.
- Vessels employing sweep booms with recovery pumps in the apex of the boom should decant forward of the recovery pump.
- All vessels, motor vehicles and other equipment not equipped with an oil/water separator should allow retention time for oil held in internal or portable tanks before decanting commences.
- When deemed necessary by the FOSC and/or SOSC or the response contractor a containment boom will be deployed around the collection area to minimize loss of decanted oil or entrainment.
- Visual monitoring of the decanting area shall be maintained so that discharge of oil in the decanted water is detected promptly.
- Decanting in areas where vacuum trucks, portable tanks or other collection systems are used for shore cleanup will be subject to the same rules as vessels.

The response contractor or responsible party will seek approval from the FOSC and/or SOSC prior to decanting by presenting the Unified Command with a brief description of the area for which decanting approval is sought, the decanting process proposed, the prevailing conditions (wind, weather, etc.) and protective measures proposed to be implemented. The FOSC and/or SOSC will review such requests promptly and render a decision as quickly as possible. FOSC authorization is required in all cases and in addition SOSC authorization is required for decanting activities in state waters.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION
Oiled Wildlife Rehabilitation Plan
Tidewater has entered into retainer agreements with the International Bird Rescue and Clean Rivers Cooperative, Inc. (CRC) to provide management, personnel and equipment to support oiled wildlife rehabilitation. Oiled wildlife response activities will be fully supported and conducted in accordance with the Wildlife Response Plan found in Chapter 9310 on the Northwest Area Contingency Plan as well as the Washington State Department of Fish and Wildlife care rules. The International Bird Rescue will provide the management team, training and volunteer database for wildlife response. Tidewater will have access to the mobile oiled wildlife response equipment (listed at www.wrrl.us) through CRC in accordance with the guidelines. A copy of retainer agreements with International Bird Rescue and CRC are included in **APPENDIX B**.
Tidewater will keep a log of all wildlife sightings by initial field observers and pass it on to International Bird Rescue upon arrival.
Rehabilitation/stabilization strategies will be affected by the specific location of the spill, responsible party resources, time of year and species affected.
1. The St. Edward's State Park facility (Kirkland, Washington) will be activated through a cooperative agreement with the Washington Department of Fish and Wildlife negotiated at the time of an incident. 2. A temporary rehabilitation facility will be established close to the spill area or in the warehouse space at Tidewater Industrial Center. Water for cleaning will be supplied by a mobile trailer (either CRC or WDFW). 3. Local rehabilitation centers will be contracted to provide facilities and/or services to rehabilitate the affected wildlife. In this scenario it is likely that International Bird Rescue personnel would perform or supervise cleaning, rehabilitation and release depending on the experience, abilities and willingness of the rehabilitation center staff and volunteers. Potential rehabilitation centers on the West Coast are available to International Bird Rescue through their extensive wildlife care network. 4. Potential stabilization sites are listed below.
Small Spill (Number of Oiled Wildlife: 1-10)
Upon activation, International Bird Rescue will send at least one Response Team member to do an assessment, and initiate an appropriate response.
• **Search and Collection Strategies** In the 1-10 animal scenario one team of two members should be adequate to do both search/collection and stabilization of oiled wildlife. A Search and Collection Plan devised with input by Oregon Department of Fish and Wildlife (ODFW) and other appropriate trustee agencies will be submitted to the Incident Command. International Bird Rescue staff and pre-trained responders/ rehabilitators will perform these tasks. Strategies will be spill scenario dependent and will use equipment provided through ICS as well as pre-stocked capture equipment such as nets, animal carriers, stabilization equipment, etc. The Search and Collection Plan will identify a preferred stabilization site, if appropriate, and include requests for deployment of necessary equipment such as CRC and/or WDFWs Stabilization Trailer, WDFWs Wildlife Cube Van, etc. Compatibility with local zoning policy will be verified prior to activating any stabilization site. Teams will work out of a field command center, be briefed and assigned to specific areas to search. Daily search plans will be formulated by the Search and Rescue Unit Leader. Search plans will consider topography, weather, species affected, tides, information from overflights and previous day's reports.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED

Small Spill (Number of Oiled Wildlife: 1-10), Continued

- **Disposal Strategies**

In a small spill, coolers with dry ice will be used to temporarily store dead oiled wildlife. Animals will be identified, logged and marked individually. They will be disposed of in accordance with DEQ guidelines and in locations and manners that have been pre-approved by DEQ.

Dead wildlife should be placed in bags. An evidence tag should be completed for and attached to each bag.

This tag will list:

- Number of animals in the bag
- Date recovered
- Team leader name
- Incident name
- If the animals are banded or tagged
- Location found

Each time the bag is transferred, a chain of custody list is signed.

If animals are removed from the bag, it must be noted on the bag and the receiving party identified.

A storage facility will be set up to store dead wildlife as requested by trustee agency representatives listed under "Potential Stabilization Sites" below.

- **Personnel**

In a small spill the personnel needs will be relatively small. They will be met by International Bird Rescue personnel, organized volunteer personnel and possibly volunteers from local rehabilitation organizations. International Bird Rescue has provided Tidewater with a six-hour callout (see "International Bird Rescue Activation" below) list to activate International Bird Rescue. International Bird Rescue has a Response Team of more than 25 with six Response Team members within four hours travel time of Portland by car and ten more within three hours travel time by plane. In addition International Bird Rescue has mutual aid agreements with groups, such as Tri-State Bird Rescue, DE and Islands Oil Spill Association, WA, as resources for additional trained personnel in the event of a catastrophic event. International Bird Rescue gave introductory training to a number of Oregon rehabilitators in 1991. In addition International Bird Rescue provided training during the summer of 1998 to an additional 30 to 60 wildlife rehabilitators and other interested individuals in the lower Columbia River region through settlement moneys received in December 1997. Volunteers who have not been trained will be given appropriate safety training prior to working and on the job supervision throughout the response by International Bird Rescue. Tidewater will not directly recruit, train, or manage volunteers.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED

Small Spill (Number of Oiled Wildlife: 1-10), Continued

- **Equipment/Supplies**

  Tidewater, CRC and International Bird Rescue have stockpiled search and collection, and stabilization supplies needed for the first 24 hours of a spill of this size. Equipment and supplies capable of being onsite within 18 hours of mobilization, will be listed separately. Specialized or unique rehabilitation equipment and supplies that are not readily available will be identified and either stockpiled or obtained within 48 hours of activation by International Bird Rescue.

Maximum Probable Spill (Number of Oiled Wildlife 11-50)

International Bird Rescue will send at least one Response Team member to do an assessment and initiate an appropriate response.

- **Search and Collection Strategies**

  In the maximum probable spill, one to two teams of two members should be adequate to do both search and collection. Additionally one to two people will be needed for stabilization. A Search and Collection Plan devised with input by ODFW and other appropriate trustee agencies will be submitted to the Incident Command. International Bird Rescue staff and pre-trained responders/rehabilitators will be used for these tasks. Strategies will be spill scenario dependent and will use equipment provided through the ICS as well as pre-stocked capture equipment such as nets, animal carriers, stabilization equipment, etc. The Search and Collection Plan will identify preferred stabilization sites if appropriate and include requests for deployment of necessary equipment such as CRC and/or WDFWs Stabilization Trailer, WDFWs Wildlife Cube Van, etc. Compatibility with local zoning policy will be verified prior to activating any stabilization site. Teams will work out of a field command center, be briefed and assigned to specific areas to search. Daily search plans will be formulated by the Search and Rescue Unit Leader. Search plans will consider topography, weather, species affected, tides and information from overflights and previous day's reports.

- **Disposal Strategies**

  In a maximum probable spill, coolers with dry ice will be used to temporarily store dead, oiled wildlife. If necessary, a freezer may be rented and set up near the stabilization site. Animals will be identified, logged and marked individually. Dead animals will be disposed of in accordance with DEQ guidelines and in locations and manners that have been pre-approved by DEQ.

  Dead wildlife shall be placed in bags. An evidence tag shall be completed for and attached to each bag.

  The tag will list:

  - Number of animals in the bag
  - Date recovered
  - Team leader name
  - Incident name
  - If the animals are banded or tagged
  - Location found

  Each time the bag is transferred, a chain of custody list is signed.

  If animals are removed from the bag, it must be noted on the bag and the receiving party identified.

  A storage facility will be set up to store dead wildlife as requested by trustee agency representatives listed under "Potential Stabilization Sites" below.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED
Maximum Probable Spill (Number of Oiled Wildlife 11-50), Continued
• **Personnel** In a maximum probable spill, the personnel needs will be 12-25. They will be met by International Bird Rescue personnel, organized volunteers and, possibly, volunteers from local rehabilitation. International Bird Rescue has provided Tidewater Barge Lines with a six-hour callout list (see "International Bird Rescue Activation" below) to activate International Bird Rescue. International Bird Rescue has a Response Team of more than 25 with six Response Team members within four hours travel time of Portland by car and ten more within three hours travel time by plane. In addition, International Bird Rescue has mutual aid agreements with groups, such as Tri-State Bird Rescue, DE and Islands Oil Spill Association, WA, as resources for additional trained personnel in the event of a catastrophic event. International Bird Rescue gave introductory training to a number of Oregon rehabilitators in 1991. In addition, International Bird Rescue will be provided training during the summer of 1998 to an additional 30-60 wildlife rehabilitators and other interested individuals in the lower Columbia River region through settlement moneys received in December 1997. Volunteers who have not been trained will be given appropriate safety training prior to working and on the job supervision throughout the response by International Bird Rescue. Tidewater will not directly recruit, train, or manage volunteers.
• **Equipment** Tidewater, CRC, and International Bird Rescue have stockpiled search and collection and stabilization supplies needed for the first 24 hours of a spill of this size. Equipment and supplies for the first 18 hours after mobilization will be listed separately. Specialized or unique rehabilitation equipment supplies that are not readily available can be obtained, as needed, by International Bird Rescue within 48 hours of mobilization. International Bird Rescue maintains a database of equipment and supply availability on their wildlife care network.
Worst Case Spill (Number of Oiled Wildlife 50+)
International Bird Rescue will send at least one Response Team member to do an assessment, and initiate an appropriate response.
• **Search and Collection Strategies** In the worst case spill, 2-15 teams of 2-3 members should be adequate to do search and collection. Additionally 4-10 (or more) people will be needed for stabilization. A Search and Collection Plan devised with input by ODFW and other appropriate trustee agencies will be submitted to the Incident Command. International Bird Rescue staff and pretrained responders/rehabilitators will be used for these tasks. Strategies will be spill scenario dependent and will use equipment provided through the ICS as well as pre-stocked capture equipment such as nets, animal carriers, stabilization equipment, etc. The Search and Collection Plan will identify a preferred stabilization site if appropriate and include requests for deployment of necessary equipment such as CRC and/or WDFWs Stabilization Trailer, WDFWs Wildlife Cube Van, etc. Compatibility with local zoning policy will be verified prior to activating any stabilization site. Teams will work out of a field command center, be briefed and assigned to specific areas to search. Daily search plans will be formulated by the Search and Rescue Unit Leader. Search plans will consider topography, weather, species affected, tides and information from overflights and previous day's reports. A stabilization collection site could be set up in a trailer or cube van maintained by CRC or WDFW used by International Bird Rescue through a cooperative agreement negotiated at the time of an incident.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED

Worst Case Spill (Number of Oiled Wildlife 50+), Continued

- **Disposal Strategies**

In a worst case spill, coolers with dry ice will be used to temporarily store dead, oiled wildlife. If needed a freezer or freezer truck may be rented and set up near the stabilization site. Animals will be identified, logged and marked individually. Dead animals will be disposed of in accordance with DEQ guidelines and in locations and manners that have been pre-approved by DEQ.

Dead wildlife shall be placed in bags. An evidence tag shall be completed for and attached to each bag.

The tag will list:

- Number of animals in the bag
- Date recovered
- Team leader name
- Incident name
- If the animals are banded or tagged
- Location found

Each time the bag is transferred, a chain of custody list is signed.

If animals are removed from the bag, it must be noted on the bag and the receiving party identified.

A storage facility will be set up to store dead wildlife as requested by trustee agency representatives listed under "Potential Stabilization Sites" below.

- **Personnel**

In a worst case spill, the personnel needs could be expected to be at least 15 people per day. Personnel needs will be met by International Bird Rescue personnel, organized volunteers and possibly volunteers from local rehabilitation organizations. International Bird Rescue has provided Tidewater with a six-hour callout list to activate International Bird Rescue. International Bird Rescue has a Response Team (see SECTION 6.2.5) of more than 25 with six Response Team members within four hours travel time of Portland by car and ten more within three hours travel time by plane. In addition International Bird Rescue has mutual aid agreements with groups, such as Tri-State Bird Rescue, DE and Islands Oil Spill Association, WA, as resources for additional trained personnel in the event of a catastrophic event. International Bird Rescue gave introductory training to a number of Oregon rehabilitators in 1991. In addition, International Bird Rescue provided training during the summer of 1998 to 30-60 wildlife rehabilitators and other interested individuals in the lower Columbia River region through settlement moneys received in December 1997. Volunteers who have not been trained will be given appropriate safety training prior to working and on the job supervision throughout the response by International Bird Rescu. Tidewater will not directly recruit, train, or manage volunteers.

Tidewater has also received verbal agreement from Cowlitz Clean Sweep to supply trained rescue and rehabilitation personnel. Contracts for these services will be negotiated at the time of the incident.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED
Worst Case Spill (Number of Oiled Wildlife 50+), Continued
• **Equipment and Supplies** Non-perishable search, collection and stabilization equipment/ supplies needed for the first 24 hours, have been stockpiled by Tidewater, CRC and International Bird Rescue. A wildlife trailer equipment list provided by CRC is included in this section. Tidewater and International Bird Rescue will make cooperative agreements at the time of an incident to obtain equipment necessary for search, collection and stabilization in the first 72 hours of a spill resulting in 500 or more oiled animals. Specialized or unique rehabilitation equipment and supplies that are not readily available can be obtained, as needed, by International Bird Rescue within 48 hours of mobilization. This equipment and supplies are available through their wildlife care network.
Potential Stabilization Sites
State Parks
Sacajawea State Park 2503 Sacajawea Park Road Pasco, Washington 99301 509-545-2361
Day Use Only
Hood Park Hood Park Road Burbank, Washington 99323
State Recreation Site/Area
Champoeg State Heritage Area Off US 99W, seven miles east of Newberg Off I-5 (Exit 278), 27 miles south of Portland (503) 633-8170 Benson SRA I-84, 30 miles east of Portland (eastbound access only) Dalton Point launch to Columbia River (westbound access only) Dabney SRA Historic Columbia River Highway, four miles east of Troutdale Koberg Beach SRS I-84, three miles east of Hood River (westbound access only) Located on Columbia River
Tidewater Barge Lines' Sites

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED	
Potential Stabilization Sites, Continued	
Tidewater Industrial Center 6305 NW Old Lower River Road Vancouver, WA 98660 (360) 693-1491	
Umatilla Terminal 31031 Launch Lane Umatilla, OR 97882 (541) 922-3251	
Wilma Terminal 2950 Wilma Drive Clarkston, WA 99403 (509) 758-9119	
Boardman Container Terminal 70 Marine Drive Boardman, OR 97818 (541) 481-3625	
Snake River Terminal 671 Tank Farm Road Pasco, WA 99301 (509) 547-7701	
Oregon Oiled Wildlife Contacts	
Evidence	
Oregon Department of Fish and Game	800-720-6339 (Office) 503-947-6000 (Office)
OERS	503-378-6377 (Office)
U.S. Fish and Wildlife Service, Attn: Stephen Zylstra	503-231-6179 (Office)
Disposal	
Oregon Department of Environmental Quality	503-229-5263 (NW Region) 503-378-8240 (Salem Office) (Western Region) 541-276-4063 (Pendleton Office) (Eastern Region)
International Bird Rescue Activation	
The International Bird Rescue will be activated when there is potential significant impact to wildlife. The procedure for activation of an International Bird Rescue response is as follows:	
1. When it is first determined that bird rescue and rehabilitation operations may be needed, notify the International Bird Rescue Headquarters at (707) 207-0380 as soon as possible.	

Management Personnel		
International Bird Rescue Headquarters Office hours M - F, 9am - 5pm, PST	707-207-0380 (24-hr emergency response line)	
Director Jay Holcomb		
Pacific Northwest/Alaska Curt Clumpner	(b) (6)	(Home) (Pager/Mobile)
EQUIPMENT AND SUPPLIES		
Clean Rivers Cooperative (CRC)	503-220-2040 (24-hr number)	

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED

International Bird Rescue Activation, Continued

2. International Bird Rescue will call the party requesting International Bird Rescue response to confirm the oil spill situation and to acquire details of the spill necessary to determine initial response (i.e. amount of oil spilled, length of coastline impacted, number of birds already affected, etc.).

3. The initial International Bird Rescue contact will in turn place the International Bird Rescue Response Team on alert. The Director of International Bird Rescue will determine the initial response team based upon the information given by the reporting party. If there is an International Bird Rescue regional response team member located near the area of the spill, she/he will be identified and alerted first, whenever possible. The Regional Representative will arrive at the spill site as soon as possible, usually within five hours of the original call for assistance.

4. Where travel time permits, International Bird Rescue guarantees a presence at the spill site within 6 hours of the original call for response.

5. International Bird Rescue will be responsible for the set-up and management of all bird rescue centers required during the spill.

6. International Bird Rescue's staff/response team members are trained and experienced rehabilitators who have cared for an extensive variety of wildlife, therefore they can also assist in the rescue/rehabilitation of mammals and reptiles during a spill.

Job Descriptions - Wildlife Rescue

The following are typical jobs in any spill where wildlife is affected. Depending on the specific circumstances of the spill they may be changed or combined as needed.

Wildlife Rescue Branch Director
Oversees all phases of the Wildlife Rescue effort. Reports to the Section Chief and interfaces with representatives of the responsible party and trustee agencies. Works with all supervisors within the wildlife rescue branch to ensure a consistent high level of care for all wildlife within the rescue effort.

Wildlife Rehabilitation Center Supervisor
Reports to the Wildlife Branch Director. Oversees the rehabilitation program within the center including nutrition, handling/housing, conditioning procedures, etc. Works closely with the Veterinary Care Supervisor to design and implement protocols appropriate for the species, product and special considerations of each incident.

Veterinary Care Supervisor
Designated by and reports to the Wildlife Rescue Branch Director. Oversees the veterinary care program during spill operations. Supervises other staff and volunteer veterinary personnel. Works closely with the other supervisors to develop care protocols and ensure consistency of care throughout the wildlife response effort. Duties include: providing emergency care to any birds needing veterinary judgment (those that fall outside of herd health policy), euthanizing birds found to be non-rehabilitable or non-placeable, evaluating birds for possible cleaning procedures, evaluating birds for release back to the wild, ordering necessary medical supplies.

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED
Job Descriptions - Wildlife Rescue, Continued
Wildlife Rescue Field Supervisor Designated by, and reports to, the Wildlife Rescue Branch Director. Oversees all field operations including the initiation and operation of Search and Rescue and Primary Care. Consults with Branch Director and Veterinary Supervisor regarding wild care protocols in the field and at primary care sites.
Primary Care Unit Leader Designated by, and reports to, the Wildlife Rescue Branch Director. Oversees the setup and all activities at the primary care center; consult with Field Supervisor about initial primary care regimen; assigns care teams and designates tasks; serves as liaison with owner/manager of the site and with any agency staff assigned to the site.
Search and Rescue Unit Leader Designated by, and reports to, the Wildlife Rescue Field Supervisor. Oversees daily design and implementation of the search and rescue plan. Oversees scheduling; instruction of crews in site hazards; designation of teams and leaders. Assigns daily search areas and return times; collects crew observations for Director; maintains records of all activities, wildlife rescued/collected.
Assistant Safety Officer Designated by the Wildlife Rescue Branch Director and Safety Officer. Coordinates with Safety Officer; monitors the primary care sites for compliance with safety standards, and search and rescue areas for hazardous situations; has authority to stop and/or prevent unsafe actions; coordinates with other staff on the scene as safety needs dictate.
Other staff functions:
Logistics: Coordinates with Wildlife Branch Director and Logistics Section service branches/units concerning housing/meals for volunteers, equipment and supplies, communications and transportation; arranges with Safety Officer for decontamination areas as needed; site security.
Transportation: Coordinates with Logistics Section ground support unit concerning transport of birds and moving of volunteers via boat, truck, van and/or private transportation.
Communications: Coordinates with Logistics Section communications unit concerning issuing radios, providing instructions on communications protocol; replacement of damaged or lost equipment.
Washington State Wildlife Response and Rescue
Responsibility for the management and supervision of the capture, transport, cleaning drying, rehabilitation and release of oiled marine wildlife resources rests with the Washington Department of Fish and Wildlife (WDFW), and other responsible agencies (e.g. U.S. Fish and Wildlife and National Marine Fisheries Service).
• In the event of a spill, notify Washington Department of Fish and Wildlife (**FIGURE 3.1-4**) • When directed by Incident Command, Washington's Wildlife Rescue Coordinator will: a. Implement rescue system b. Activate "Oiled Wildlife Reporting" line c. Notify and establish contract(s) with contractor(s) for primary care, search and collection and the bird treatment center d. Activate 1-800-phone system for volunteer information e. Set-up safety training for volunteers f. Activate Bird Treatment Center

6.5 WILDLIFE PROTECTION AND REHABILITATION

* 24-hour number

6.5 WILDLIFE PROTECTION AND REHABILITATION, CONTINUED
Washington State Wildlife Response and Rescue, Continued
Rescue and treatment of marine mammals will be coordinated by USFWS for sea otters and NMFS for all other marine mammals.

6.6 ENDANGERED AND THREATENED SPECIES

COMMON NAME	SCIENTIFIC NAME	HABITAT	OREGON STATUS	WASHINGTON STATUS	FEDERAL STATUS
Albatross, short-tailed	*Phoebastria (=Diomedea) albatrus*	Pelagic; often in regions of high productivity	E	C	E
Butterfly, Oregon silverspot	*Speyeria zerene hippolyta*	Coastal salt spray meadows, stabilized dunes, montane meadows	—	E	T
Catchfly, Spalding's	*Silene spaldingii*	Palouse Prairies, sometimes extending into areas where the grasslands intermingled with ponderosa pine woodlands	E	T	T
Checker-mallow, Nelson's	*Sidalcea nelsoniana*	Moist, open ground, prairie merges with deciduous woodland	T	E	T
Checkermallow, Wenatchee Mountains	*Sidalcea oregana var. calva*	Wenatchee Mountains sagebrush plains, meadowland, and ponderosa pine forest	—	E	E
Chub, Hutton tui	*Gila bicolor ssp.*	Springs in the Alkali subbasin	T	—	T
Chub, Oregon	*Oregonichthys crameri*	Slow-moving pools, sloughs, backwaters, ponds, and reservoirs	—	—	T
Crane, Sandhill	*Grus Canadensis*	Lower Columbia River bottomlands	—	E	—
Deer, Columbian white-tailed Columbia River DPS	*Odocoileus virginianus leucurus*	Farmlands, brushy areas, woods, and suburbs and gardens	—	E	E
Desert-parsley, Bradshaw's	*Lomatium bradshawii*	Open, clay soil bottomland with seasonal standing water	E	E	E
Howellia, water	*Howellia aquatilis*	Bottom sediments of ponds and sloughs	T	T	T

T - Threatened
E - Endangered

http://www.fws.gov/endangered/
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp
http://wdfw.wa.gov/conservation/endangered/

6.6 ENDANGERED AND THREATENED SPECIES, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	OREGON STATUS	WASHINGTON STATUS	FEDERAL STATUS
Ladies'-tresses, Ute	*Spiranthes diluvialis*	Moist to very wet meadows along streams	—	E	T
Lupine, Kincaid's	*Lupinus sulphureus (=oreganus) ssp. kincaidii (=var. kincaidii)*	Remnant upland and wetland prairies	T	E	T
Murrelet, marbled CA, OR, WA	*Brachyramphus marmoratus marmoratus*	Coastal, old-growth forests of the Pacific Northwest	T	T	T
Oregon Spotted Frog	*Rana pretiosa*		—	E	C
Paintbrush, golden	*Castilleja levisecta*	Open grasslands		E	T
Pelican, Brown	*Pelecanus occidentalis*	Coastal waters near shore and over the continental slope	E	E	—
Plover, western snowy Pacific coastal pop.	*Charadrius alexandrinus nivosus*	Coastal wetlands and coastal dune	T	E	T
Rabbit, pygmy Columbia Basin DPS	*Brachylagus idahoensis*	Dense stands of big sagebrush growing in deep loose soils	—	E	E
Salmon, chinook (fall Snake R.)	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	C	T
Salmon, chinook lower Columbia R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	C	C	T
Salmon, chinook spring upper Columbia R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	—	C	E

T - Threatened
E - Endangered

http://www.fws.gov/endangered/
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp
http://wdfw.wa.gov/conservation/endangered/

6.6 ENDANGERED AND THREATENED SPECIES, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	OREGON STATUS	WASHINGTON STATUS	FEDERAL STATUS
Salmon, chinook spring/summer Snake R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	C	T
Salmon, chinook upper Willamette R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	—	—	T
Salmon, chum Columbia R.	*Oncorhynchus (=Salmo) keta*	Coastal waters; enters streams to spawn	C	C	T
Salmon, coho lower Columbia R.	*Oncorhynchus (=Salmo) kisutch*	Large rivers, headwater streams, reservoirs	E	—	T
Salmon, sockeye Snake R.	*Oncorhynchus (=Salmo) nerka*	Adult sockeye oceanic; kokanee do best in high, cold, large mountain lakes	—	C	E
Sandwort, Marsh	*Arenaria paludicola*	Freshwater marshes	—	—	E
Sea turtle, green except where endangered	*Chelonia mydas*	Coasts, open sea	E	T	T
Sea turtle, leatherback	*Dermochelys coriacea*	Warm sands of tropical beaches	E	E	E
Sea turtle, loggerhead	*Caretta caretta*	Estuaries, coastal streams and salt marshes	T	T	E
Sea Turtle, Pacific Ridley	*Lepidochelys olivacea*	Coastal waters near shore	T	—	T
Sea-lion, Steller eastern pop.	*Eumetopias jubatus*	Coastal waters near shore and over the continental slope	—	T	—

T - Threatened
E - Endangered

http://www.fws.gov/endangered/
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp
http://wdfw.wa.gov/conservation/endangered/

6.6 ENDANGERED AND THREATENED SPECIES, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	OREGON STATUS	WASHINGTON STATUS	FEDERAL STATUS
Smelt, Pacific eulachon	*Thaleichthys pacificus*	Columbia River and numerous tributaries	—	C	T
Steelhead lower Columbia R.	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	C	C	T
Steelhead middle Columbia R.	*Oncorhynchus mykiss*	Small headwater streams, large rivers, lakes, reservoirs	C	C	T
Steelhead Snake R. Basin	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	—	C	T
Steelhead upper Columbia R. Basin	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	—	C	T
Steelhead upper Willamette R.	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	—	—	T
Stickseed, showy	*Hackelia venusta*	Dry, loose, granitic sand, and in crevices of granite	—	E	E
Streaked-horned Lark	*Eremophila alpestris strigata*		—	E	C
Sturgeon, North American green	*Acipenser medirostris*	Freshwater and Saltwater	—	—	T
Trout, bull	*Salvelinus confluentus*	Bottom of deep pools in cold rivers and large tributary streams	—	C	T
Whale, humpback	*Megaptera novaeangliae*	Surface of the ocean	—	E	E

T - Threatened
E - Endangered

http://www.fws.gov/endangered/
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp
http://wdfw.wa.gov/conservation/endangered/

6.6 ENDANGERED AND THREATENED SPECIES, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	OREGON STATUS	WASHINGTON STATUS	FEDERAL STATUS
Whale, killer Southern Resident DPS	*Orcinus orca*	Open ocean and coastal waters	—	E	E
Wolf, gray	*Canis lupus*	Mixed, grassland/herbaceous	E	E	E

T - Threatened
E - Endangered

http://www.fws.gov/endangered/
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp
http://wdfw.wa.gov/conservation/endangered/

6.7 VULNERABILITY ANALYSIS

VULNERABILITY ANALYSIS (DETAILED)
Water Intakes:
(b) (7)(F), (b) (3) [redacted]
Schools:
N/A
Medical Facilities:
N/A
Residential Areas:
The SRT Pasco Rail Diesel line is located near residential areas in Pasco, WA

6.7 VULNERABILITY ANALYSIS, CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Businesses:
Industrial businesses area located near the pipelines.
Wetlands or Other Sensitive Environments:
N/A

6.7 VULNERABILITY ANALYSIS, CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Fish and Wildlife:
Refer to SECTION 6.6 for a list of endangered and threatened species by state. Refer to Section 6 of the Columbia River Graphic Response Plans (GRPs) for a description of sensitive resources.

6.7 VULNERABILITY ANALYSIS, CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Lakes and Streams:
Endangered Flora and Fauna:
Refer to SECTION 6.6 for a list of endangered and threatened species by state.
Recreational Areas:
MAP ID # - FEATURE - NAME - PRIORITY: 8 - Park - Sacajawea State Park - High 9 - Park - Hood Park - High 10 - Park - McNary National Wildlife Refuge - High

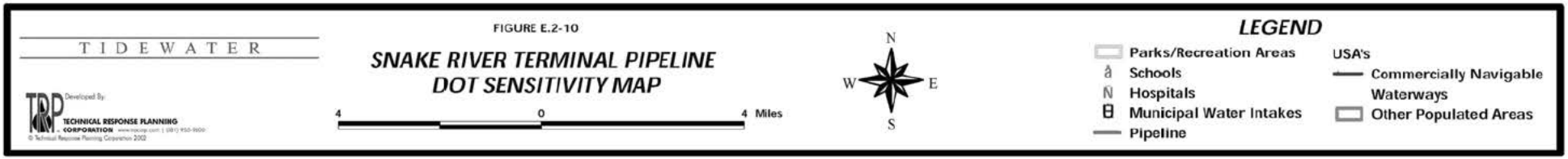
6.7 VULNERABILITY ANALYSIS, CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Transportation Routes (Air, Water, Land):
MAP ID # - FEATURE - NAME - PRIORITY: 1 - Commercially navigable waterways - Columbia River - Medium 2 - Commercially navigable waterways - Snake River - Medium
Utilities:
Other Applicable Areas:
MAP ID # - FEATURE - NAME - PRIORITY: 3 - Other populated area - Burbank - Medium 4 - Other populated area - Pasco - Medium 5 - Other populated area - Finley - Medium

6.8 SENSITIVITY MAPS

Click to view/print DOT Sensitivity Map

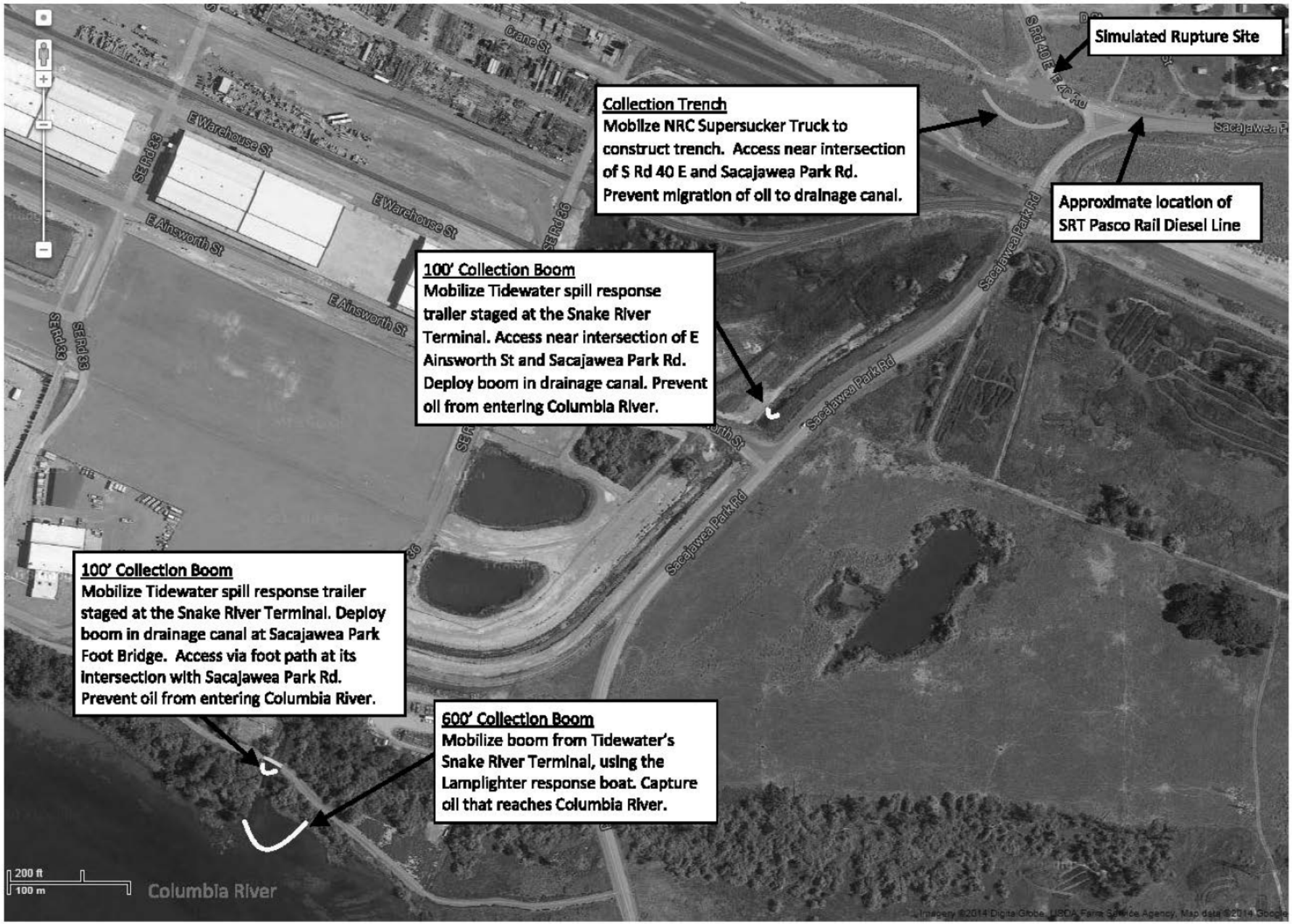
(b) (3), (b) (7)(F)


TIDEWATER
Developed By:
TRP TECHNICAL RESPONSE PLANNING CORPORATION
FIGURE E.2-10
SNAKE RIVER TERMINAL PIPELINE
DOT SENSITIVITY MAP
4 0 4 Miles
N
W E
S
LEGEND
Parks/Recreation Areas
Schools
Hospitals
Municipal Water Intakes
Pipeline
USA's
Commercially Navigable Waterways
Other Populated Areas

6.9 TACTICAL SITES

Click here for - Pipeline Segment Response & Protection Strategy

Tidewater Washington Pipeline Response & Protection Strategy – Pipeline Segment

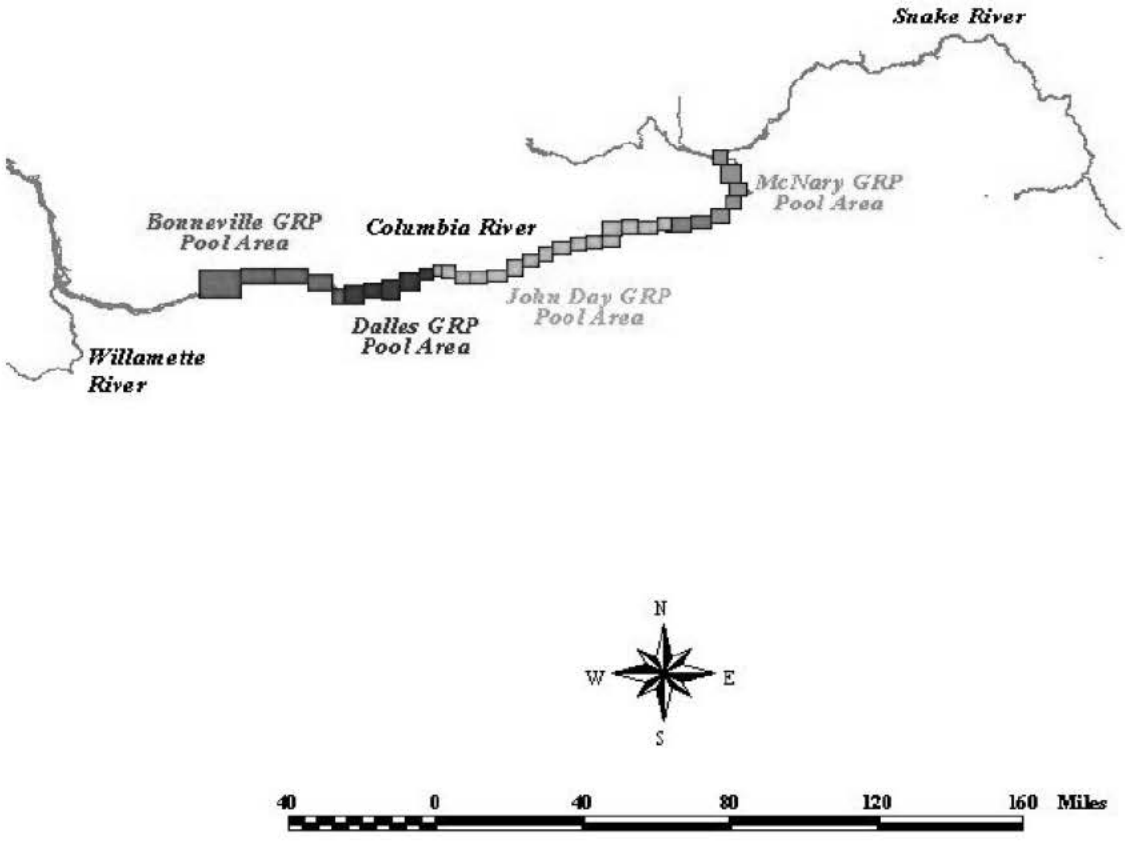


6.9 TACTICAL SITES

Click here for - Middle Columbia River/McNary Pool Area GRP

Northwest Area Committee

MIDDLE COLUMBIA RIVER GEOGRAPHIC RESPONSE PLAN (GRP)



Spill Response Contact Sheet

Required Notifications For Hazardous Substance Or Oil Spills

National Response Center	**(800) 424-8802**
In Oregon:	
Oregon Emergency Response System	**(800) 452-0311**
	(800) OILS-911
In Washington:	
Emergency Management Division	**(800) 258-5990**
Department of Ecology Central Regional Office	**(509) 575-2490**
Department of Ecology Eastern Regional Office	**(509) 456-2926**

U.S. Coast Guard

National Response Center	**(800) 424-8802**
Marine Safety Office Puget Sound:	
Watchstander	**(206) 217-6232**
Safety Office	(206) 217-6232
Marine Safety Office Portland	
Watchstander	**(503) 240-9301**
Spill Response	(503) 240-9379
Pacific Strike Team	**(415) 883-3311**
District 13:	
MEP/drat	(206) 220-7210
Command Center	(206) 220-7001
Safety Officer	(206) 220-7242
Public Affairs	(206) 220-7237
Vessel Traffic Service (VTS)	**(206) 217-6050**

Environmental Protection Agency (EPA)

National Response Center	**(800) 424-8802**
Region 10 Spill Response	**(206) 553-1263**
Washington Ops Office	(360) 753-9437
Oregon Ops Office	(503) 326-3250
Idaho Ops Office	(208) 334-1450
RCRA/CERCLA Hotline	(800) 424-9346
Public Environmental Resource Center	**(206) 553-1200**

National Oceanic Atmosphere Administration

Scientific Support Coordinator	**(206) 526-4911**
Weather	(206) 526-6087

Department Of Interior

Regional Environmental Officer	(503) 231-6157

Response Contractors

Clean Rivers Cooperative	**(503) 220-2040**
Cowlitz Clean Sweep, Inc.	**(360) 423-6316**
Foss Environmental	**(503) 283-1150**
Fred Devine	**(503) 283-5285**
Global Environmental	**(206) 623-0621**
MSRC	**(800) 259-6772**
NRC	**(800) 899-4672**
Tidewater Environmental	**(503) 289-4274**

Washington State

Department of Ecology:	
Headquarters	(206) 407-6900
Central Region	**(509) 575-2490**
Eastern Region	**(509) 456-2926**
SW Region	**(360) 407-6300**
NW Region	**(425) 649-7000**
Emergency Management Division	(360) 438-8639
	(800) 258-5990

Oregon State

Department of Environmental Quality	
Headquarters (Portland)	(503) 229-5153
Northwest Region (Portland)	(503) 229-5263
Eastern Region (Bend)	(541) 338-6146
Eastern Region (Pendleton)	(541) 278-4063
Western Region (Coos Bay)	(541) 269-2721
Western Region (Eugene)	(541) 686-7838
Western Region (Medford)	(541) 776-6010
Western Region (Salem)	(503) 378-8240
Emergency Response System (OERS)	**(800) 452-0311**
	(503) 378-6377
(In state)	**(800)OILS-911**
Stop Oregon Litter & Vandalism	(503) 647-9855

Boldface type are 24-hour numbers

Middle Columbia River/McNary Pool Area

GEOGRAPHIC RESPONSE PLAN

1. Introduction: Scope of this Project

Geographic Response Plans are intended to help the first responders to a spill avoid the initial confusion that generally accompanies any spill. This document serves as the federal and state on-scene-coordinators "orders" during a spill in the area covered by this GRP (see Chapter 3 for area covered). As such, it has been approved by the U.S. Coast Guard, Environmental Protection Agency, Oregon Department of Environmental Quality, and the Washington State Department of Ecology Spill Program. Changes to this document are expected as more testing is conducted through drills, site visits, and actual use in spill situations. To submit comments/suggestions/changes, please go to "submit comments" page on www.rrt10nwac.com web site.

GRPs have been developed for the marine waters of Oregon and Washington, and the Columbia and Snake Rivers and are being developed for the inland areas of Washington, Oregon and Idaho. They are prepared through the efforts and cooperation of the Washington Department of Ecology, Washington Department of Fish and Wildlife, Oregon Department of Environmental Quality, Idaho State Emergency Response Commission, the U.S. Coast Guard, the Environmental Protection Agency, response contractors and local emergency responders.

GRPs were developed through workshops involving federal, state, and local oil spill emergency response experts, response contractors, and representatives from tribes, industry, ports, environmental organizations, and pilots. Workshop participants identified resources which require protection, developed operational strategies, and pinpointed logistical support.

Following the workshops, the data gathered was processed and reproduced in the form of maps and matrices which appear in Chapters 4 through 6. The maps were originally generated using MacIntosh Canvas while the matrices were created using Excel for Windows. The maps in this revision were created using ArcVies. The balance of each GRP was produced using Word for Windows.

The first goal of eack GRP is to identify resources needing protection; response resources (boom, boat ramps, vessels, etc.) needed; site access and staging; tribal and local response community contacts; and local conditions (e.g. physical features, hydrology, currents and tides, winds and climate) that may affect response strategies.

Secondly, response strategies were developed based on the sensitive resources noted, hydrology, and climatic considerations. Individual response strategies identify the amount and type of equipment necessary for implementation. The response strategies are then applied to likely spill scenarios for oil movement, and prioritized, taking into account factors such as feasibility, wind, and tidal conditions.

Draft strategy maps and matrices were then sent out for review and consideration of strategy viability. Field verification was conducted, and changes proposed by the participants were included in a semi-final draft which was offered for final review to all interested parties and the participants of the field verification.

Finally, the general text of the GRP was compiled along with the site description, reference maps and logistical support.
Items included in Logistical Support:

- Location of incident command posts for the central response organization;
- Local equipment and trained personnel;
- Local facilities and services and appropriate contacts for each;
- Site access & contacts;
- Staging areas;
- Helicopter and air support;
- Local experts;
- Volunteer organizations;
- Potential wildlife rehabilitation centers;
- Marinas, docks, piers, and boat ramps;
- Potential interim storage locations, permitting process;
- Damaged vessel safehavens;
- Vessel repairs & cleaning;
- Response times for bringing equipment in from other areas.

2. Site Description

This plan covers the 33 mile reach of the McNary Pool Area (a.k.a. Lake Wallula) within the Columbia River from approximately mile marker 292 on the west to mile marker 325 on the east.

The McNary Pool Area is divided into seven subregions: RM 323-325, Pasco/Kennewick/Strawberry Islands; RM 317-323, Villard Ponds to Hover; RM 313-317, Badger Island to Walla Walla River; RM 310-313, Port Kelley to Juniper Canyon; RM 305-310, Juniper Canyon; RM 297-305, Lake Wallula to Hat rock; RM 292-297, McNary Dam. Also included in this GRP is the Snake River subregion S-1 that includes Columbia River Mile 323 to Snake River Mile 3.

Refer to Chapter 6 for detailed resource information.

2.1. Physical Features

A hydroelectric dam, the McNary Dam Project, is located on the western end of the pool area.

The seven subregions of the McNary Pool Area may include the following shoreline habitats:

Exposed rocky headlands
Wave-cut platforms
Pocket beaches along exposed rocky shores
Sand beaches
Sand and gravel beaches
Sand and cobble beaches
Sheltered rocky shores
Sheltered marshes

2.2. Hydrology

The Columbia River is the 4th largest river in North America. It originates in Columbia Lake, high in the Canadian Rockies, and travels 1,214 miles from Canada into the United States, where it creates the border between Washington and Oregon before flowing into the Pacific Ocean. It drains a 258,500 sq. mile area of the Western United States and British Columbia.

Tributary rivers within the McNary Pool Area include the Yakima (WA), Snake (WA), and Walla Walla (WA) basins. Additionally, numerous creeks also empty into the Columbia River in this pool area.

2.3. Currents and Tides

As this GRP includes the Mid-Columbia River area, there are no tidally influenced areas. Also, the McNary Pool Area has no free-flowing water, with water flow being governed strictly as a matter of when and how much water is allowed to pass through the spillways of the various dams.

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2.4. Winds

Throughout the year, wind gusting at high velocities can be expected in this area.

Additional information may be available from the National Weather Service.

2.5. Climate

The McNary Pool area (normal elevation 340 feet) is in the dry continental climate to the east of the Cascade Mountains. At McNary Dam, the mean annual temperature is 53°F, ranging from 34°F in January to 73°F in July and August. Recorded temperature extremes are -22°F and 111°F. Mean annual precipitation is 8 inches with half occurring between November and February. Annual snowfall is 3 inches, with more than half occurring in December and January. At Kennewick, WA the mean annual temperature is 55°F, ranging from 34°F in January to 75°F in July. Recorded temperature extremes are -23°F and 110°F. Mean annual precipitation is 8 inches with half occurring between November and February. Annual snowfall is 8 inches, with almost three quarters occurring in December and January.

"The McNary Pool area is a relatively dry region lying east of the Cascade Mountains. The Cascades serve as an effective moisture barrier, causing storms to dump much of their moisture west of the peaks and leaving areas to the east in a "rain shadow." As a result, the area is generally rather dry….The Columbia is used in irrigation, transportation and hydroelectric power, and therefore dominates the area.

This region is Oregon's major wheat producing area. Grain production on dry land farms is the main source of agricultural income….Other important commodities…include green peas, irrigated truck crops, beef cattle, sheep, alfalfa, and poultry."
(http://www.ocs.orst.edu/pub_ftp/reports/zone/Zone_6_summary.html, with minor edits)

"In addition to the older irrigated sections of the Yakima and Walla Walla valleys, a major irrigation project has been developed in the Central Basin. The more important crops grown in the irrigated sections include sugar beets, potatoes, alfalfa, corn, onions, beans, peppermint, spearmint, hops and a variety of vegetable crops." (http://www.wrcc.sage.dri.edu/narratives/WASHINGTON.htm)

2.6. Risk Assessment

The Columbia River is one of the principal environmental and economic resources found in the Pacific Northwest. Protection of this river is critical to the vast natural and cultural resources which are dependent upon it.

Native anadromous and resident fish species found here depend on the Columbia for their continued existence. Over 25 plant and animal species located along the Columbia are currently listed or proposed as endangered species. Various species of ducks, eagles, geese, herons, and other water birds live, breed, and winter in this area.

The Columbia River and associated resources play an important part in past and present Native American Indian cultural, economic, and religious activities.

The waters of the Columbia are used by farmers to irrigate crops. It is also used to fill domestic, municipal, and industrial water needs.

Highway transportation exists on both sides of the river, and the routes are usually adjacent to the river banks. Many trucks are delivering to communities and businesses along the river, but the highways also provide routes for interstate transit.

2.7. Railroad/Barge Movements of Oils and Hazardous Substances

As with much of the Columbia River, rail transportation often parallels the river quite closely.

There is a rail line on either side of the Columbia River in the subject area. On the right descending side of the river the line is run by Burlington Northern Santa Fe. On the left descending side the line is run by Union Pacific. While this GRP is primarily concerned with responses to oil spills, basic information on hazardous substance movements through the region may also prove useful.

Movements of hazardous substances for the year 2001 on the Union Pacific line in the Columbia River Gorge included:

1) Chlorine Gas	404
2) Sodium Hydroxide	1,215
3) Butane	131
4) Propane	1,420
5) Methanol (methyl Alcohol)	1,325
6) Asbestos	88
7) Anhydrous Ammonia	252
8) Phosphoric Acid	84
9) Ammonium Nitrate	468
10) Sulfuric Acid	335
TOTAL	5,722

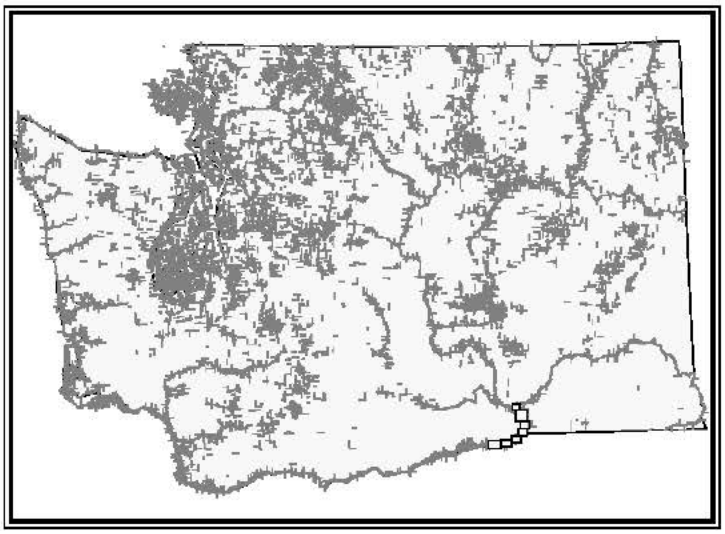
The Portland Subdivision had a total of 18,603 movements of "Hazardous Materials, Hazardous Wastes, and Environmentally Hazardous Substances" as defined by the Department of Transportation. The highest volume group is the Flammable and Combustible Liquids with a total of 4,640 movements of which the Methanol listed above at 1,325 was the largest individual component.

Some other significant movements were.....

Yellow Phosphorous	562
Phenol	403
Elevated Temperature Material (Asphalt)	815.

Today, the navigable waters of the Columbia are increasingly being used as a means of transport, especially tugs moving barges filled with commodities. Commodities are shipped up and down the river year round. In 2000, almost 8 million tons of commodities traveled between McNary Lock and Dam and Kennewick, WA. Of that total, 2.1 million tons were petroleum products. (Waterborne Commerce of the United States, Calendar Year 2000, Part 4, page 58, Department of the Army Corps of Engineers Institute for Water Resources)

MIDDLE COLUMBIA RIVER
McNARY POOL AREA
GEOGRAPHIC RESPONSE PLAN (GRP)



River Miles
Columbia 323-325
Snake 0-2.6

Columbia River

Snake River

River Mile
317-323

River Mile
313-317

Area of GRP Coverage

River Mile
310-313

Columbia River

River Mile
305-310

River Mile
297-305

River Mile
292-297

N
W E
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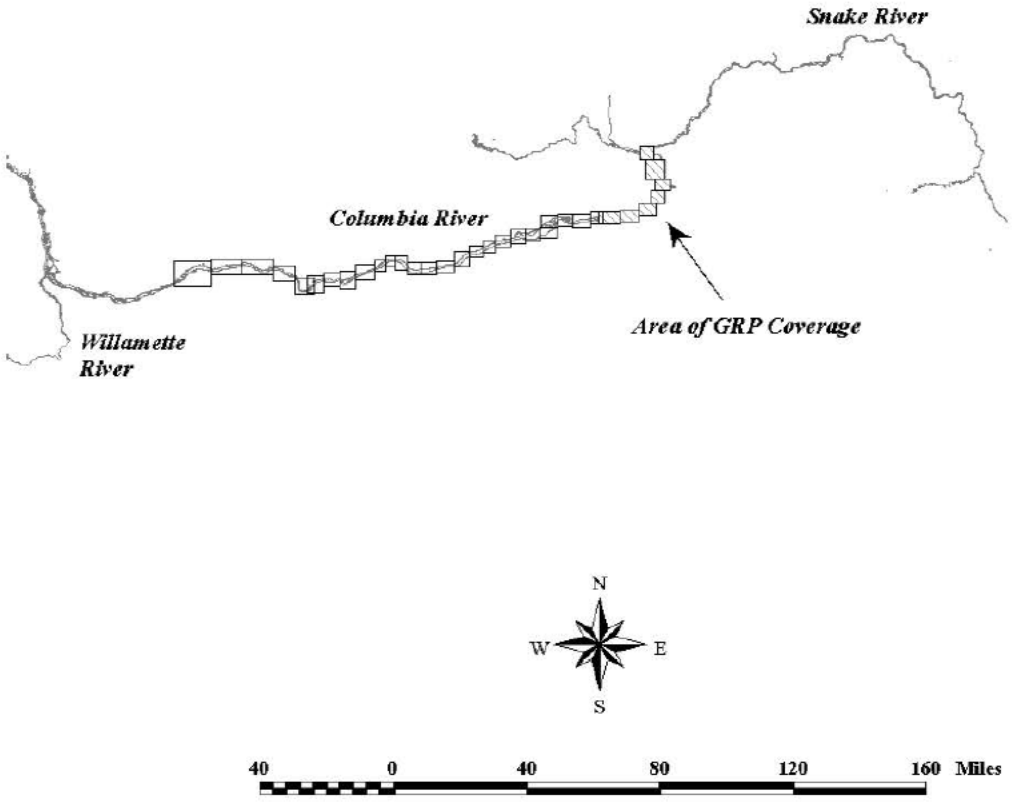
5 0 5 10 15 20 Miles

Rev s on 3
May 1, 2004

Northwest Area Committee

MIDDLE COLUMBIA RIVER
McNARY POOL AREA
GEOGRAPHIC RESPONSE PLAN (GRP)



4. General Protection/Collection Strategies

4.1. Chapter Overview

This chapter details the specific response strategies and resources to protect as outlined by the participants of the GRP workshop for Middle Columbia River/McNary pool area. It describes the strategies determined for each area and the prioritization of those strategies.

Maps & Matrices

The maps in this chapter provide information on the specific location of strategy points. They are designed to help the responder visualize response strategies. Each Booming and Collection Strategy map includes a matrix on the facing page. Each matrix indicates the exact location, intent and implementation of the strategy indicated on the map.

Strategy Tear Out Sheets, when developed, will detail the information necessary for a particular response action. Strategy Tear Out Sheets are not included in this version of the GRP.

Major Protection Techniques

All response strategies fall into one of three major techniques that may be utilized either individually or in combination. The strategies listed in 4.2 are based on the following techniques, and are explained in detail in section 4.3:

Dispersants: Washington State Policy currently does not allow use of dispersants in this area. Certain chemicals break up slicks on the water. Dispersants can decrease the severity of a spill by speeding the dissipation of certain oil types. Their use will require approval of the Unified Command. Dispersants will only be used in offshore situations under certain conditions, until further determinations are made by the Area Committee and published in the Area Contingency Plan.

In Situ Burning: Approval to burn in this area is unlikely due to the proximity of population to a potential burn site. Burning requires the authorization of the Unified Command, who determine conformance of a request to burn with the guidelines set forth in the Area Plan. This option is preferable to allowing a slick to reach the shore provided that population areas are not exposed to excessive smoke. Under the right atmospheric conditions, a burn can be safely conducted in relative close proximity to human population. This method works on many types of oil, and requires special equipment including a fire boom and ignitors.

Mechanical Recovery Strategies: If a spill is too close to shore to use In Situ burning or dispersants, the key strategies are to use collection, diversion, or exclusion booming to contain the slick and prevent it from entering areas with sensitive wildlife and fisheries resources. This will be attempted through the use of various booming strategies. These options are described in detail in Table A-1 in Appendix A.

Priorities

The strategy priority matrices (Section 4.2.) were developed for subregions within the overall GRP area in order to reflect certain geographic divisions and specific scenarios. The response strategies indicated in the priority matrices are explained in detail in the Maps & Matrices section (Section 4.3.). It is implied that control and containment at the source is the number one priority of any response. If in the responder's best judgment this is not feasible, then the priorities laid out in the priority matrices take precedence over containment and control.

4.2. Strategy Prioritization

Priorities for the McNary Pool of the Columbia River generally reflect the downstream movement of oil discharged into the river. Therefore, the first strategy downstream from the spilled oil which can be deployed before the oil arrives ranks higher in priority than strategies further downstream. One key exception to this rule is the **fish passage structure at McNary Dam**, which should receive top priority protection given the vulnerability of fish at this location **. Note that these priorities may change at any time during a spill based on prevailing conditions and resource agency input**

PASCO/KENNEWICK/STRAWBERRY ISLAND PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
MSN-2.6	Strawberry Island.	Deflection - protect west end of island if wind blowing oil upriver.	(2) 500'	Place chevron at west end of island.	Tidewater terminal.	By boat - many launching points nearby.	Canada goose nesting habitat/Wildlife Refuge	(b) (7)(F), (b) (3)	
MSN-1.7	Inlet west of Highway 410 (south end).	Exclusion	900'	Place off point of land just west of bridge.	Tidewater and Chevron terminals. Across entrance to inlet.	Hood Park.	Sensitive marsh habitat. Hood Park. Sacajawea Park.		
MSN-1.1	Sacajawea State Park.	Collection	500'	Place 1 section (500') of boom, angled upstream between Chevron & tip of park to to deflect oil away from park.	Chevron Terminal; Sacajawea State Park.	Chevron Terminal; Sacajawea State Park (small boat basin).	Sacajawea State Park shores		
MSN-1	Inlet just east of Snake River railroad trestle (south end).	Exclusion.	200'	Block off opening to inlet.	Tidewater and Chevron terminals.	Hood Park.	Sensitive marsh habitat. Hood Park. Sacajawea Park.		
MSN-0.9	Inlet just west of Snake River railroad trestle (south end).	Exclusion - Prevent oil from entering inlet.	1000'	Use 1000' of exclusion boom across mouth of inlet.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks, but no road.	Migratory waterfowl, shorebirds		
MSN-0.8	First inlet mouth south of Snake River railroad trestle (south end)	Exclusion - Prevent oil from entering valuable bird resting and feeding area.	500'	Use 500' of exclusion boom across mouth of inlet.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks, but no road.	Migratory waterfowl, shorebirds		
MSN-0.6	Sacajawea State Park.	Collection - keep oil off park shoreline	500'	Place 1 section (500') of boom, angled upstream between Chevron & tip of park to to collect oil away from park.	Chevron Terminal; Sacajawea State Park.	Chevron Terminal; Sacajawea State Park (small boat basin).	Sacajawea State Park shores		
MSN-0.55	Sacajawea State Park.	Deflection - keep oil off park shoreline	500'	Place 1 section (500') of boom, angled downstream between Chevron & tip of park to deflect oil away from park.	Chevron Terminal; Sacajawea State Park.	Chevron Terminal; Sacajawea State Park (small boat basin).	Sacajawea State Park shores		
MSN-0.5	Second inlet mouth south of Snake River railroad trestle - north side of entrance.	Deflection - Prevent oil from entering valuable bird resting and feeding area.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks, but no road.	Migratory waterfowl, shorebirds		

PASCO/KENNEWICK/STRAWBERRY ISLAND PROPOSED BOOMING AND COLLECTION STRATEGIES

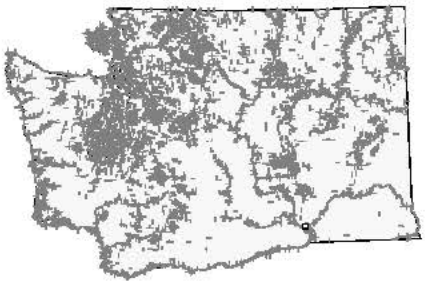
Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-324.8 M-324.65	Point west across river from Sacajawea State Park.	Deflection - Protect shallow water habitat.	(2) 500'	Use 2 sections (500' each) of deflection boom at point north of shallow water inlet, west of the Snake River confluence.	Hood Park.	Road access possible.	Shallow water habitat; Salmonid concentrations and habitat; resident fish	(b) (7)(F), (b) (3)	
M-324.4	Inlet opening, south of M 324.65 strategy.	Exclusion - Protect shallow water habitat.	500'	Use 500' of exclusion boom between two points, south of SMP-12	Hood Park.	Access by boat.	Shallow water habitat; Salmonid concentrations and habitat; resident fish		
M-324	Inlet opening, west side of Columbia River - south of M-324.4.	Exclusion - Protect shallow water habitat.	750'	Use 750' of exclusion boom between points, south of SMP 13.	Hood Park.	Access by boat.	Shallow water habitat; Salmonid concentrations and habitat; resident fish		
M-323.8	Second inlet mouth from Snake River railroad trestle.	Exclusion - Prevent oil from entering valuable bird resting and feeding areas.	750'	Use 750' of exclusion boom across mouth of inlet.	Hood Park boat launch area.	By boat, Hood Park launch area. Road from Burbank reaches the East end of this inlet.	Migratory waterfowl, shorebirds		
M-323.6	North point of third inlet from Snake River railroad trestle.	Deflection - Prevent oil from entering valuable bird resting and feeding area.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boad launch area.	Hood Park launch area. Site accessible by tracks, but no road.	Migratory waterfowl, shorebirds		
M-323.5	Third inlet from Snake River railroad trestle.	Exclusion - Prevent oil from entering valuable bird resting and feeding area.	750'	Use 750' of exclusion boom across mouth of inlet.	Hood Park boat launch area.	By boat - Hood Park launch area.	Migratory waterfowl, shorebirds		
M-323.3	North end of 4th inlet south of Snake River railroad trestle.	Deflection - Prevent oil from entering valuable bird resting and feeding areas.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks, no road.	Migratory waterfowl, shorebirds		
M-323.2	Fourth inlet south of Snake River railroad trestle.	Exclusion - Prevent oil from entering valuable bird resting and feeding areas.	2000'	Use 2000' of boom connected along points from strip of land in the south to the north side of entrance. Use islands in between to assist.	Hood Park boat launch area.	By boat- Hood Park launch area.	Migratory waterfowl, shorebirds		
M-322.9	Island west of south end of strategy M-323.2.	Deflection - Prevent oil from entering valuable bird resting and feeding areas.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks; no road.	Migratory waterfowl, shorebirds		

PASCO/KENNEWICK/STRAWBERRY ISLAND PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-322.75	The next two points south of M-323.2.	Deflection - Prevent oil from entering valuable bird resting and feeding areas.	500' - more if needed.	Use 1 sections (500') of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks; no road.	Migratory waterfowl, shorebirds	(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
		No Strategies Identified							

McNary Pool
RM 323-325
Pasco/Kennewick/Strawberry Islands

Proposed Booming and Collection Strategies



Legend

- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

Next Map

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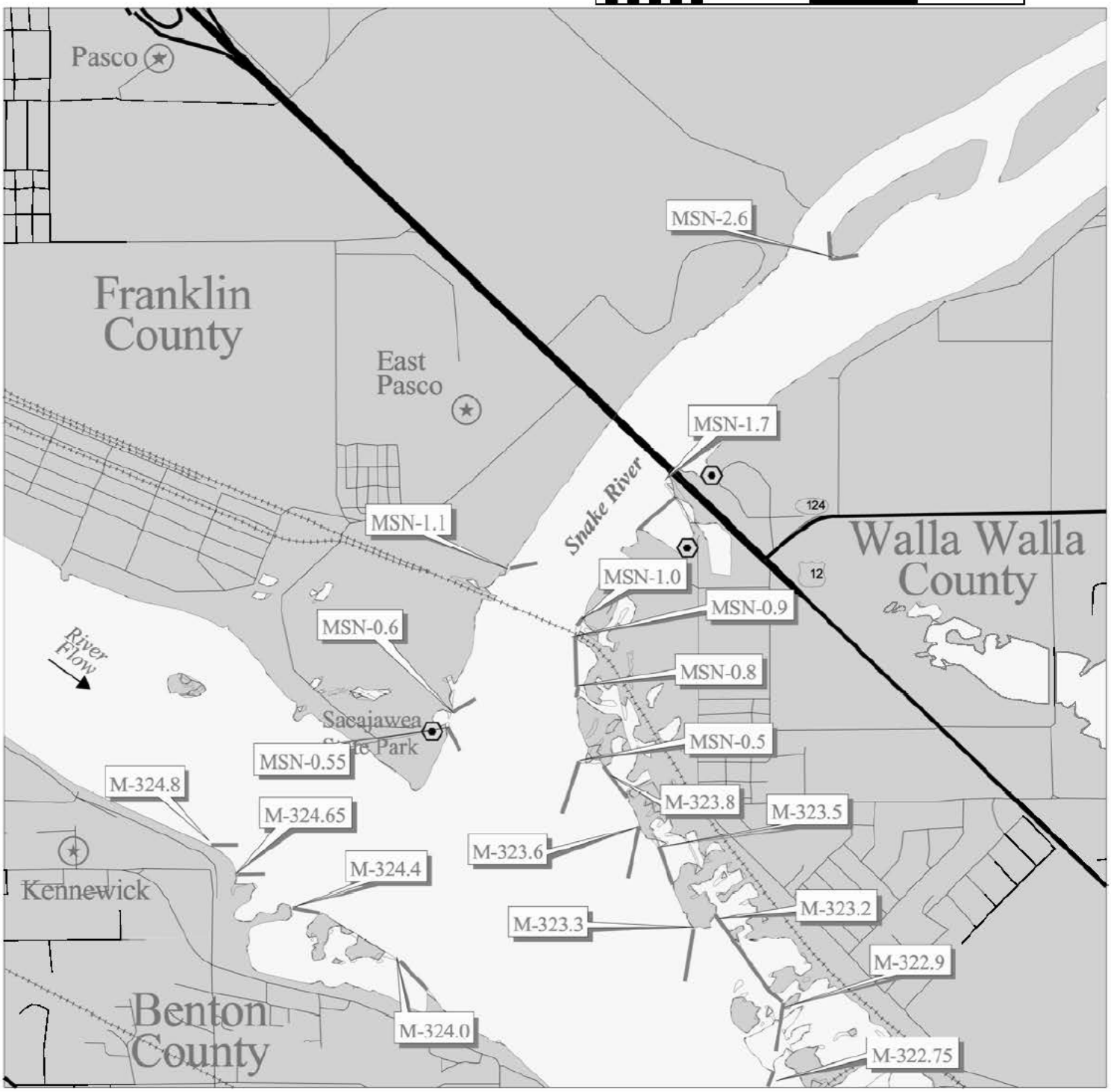
2000 0 2000 4000 6000 Feet



VILLARD POND TO HOVER PROPOSED BOOMING AND COLLECTION STRATEGIES

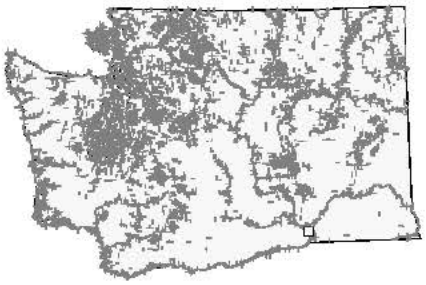
Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-322.5	East end of Columbia River railroad trestle.	Deflection - Prevent oil from entering valuable bird resting and feeding areas.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks; no road.	Migratory waterfowl, shorebirds	(b) (7)(F), (b) (3)	
M-322.3	Point south of Columbia River trailroad trestle.	Deflection - Prevent oil from entering valuable bird resting and feeding areas.	1000' - more if needed.	Use 1000' of deflection boom off north entrance point, send oil into middle of channel.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks; no road.	Migratory waterfowl, shorebirds		
M-322.1	Entrance to Villard Pond.	Exclusion - Prevent oil from entering valuable bird resting and feeding areas.	500' exclusion	Use 500' exlusion boom to close off Villard Pond.	Hood Park boat launch area.	Hood Park launch area. Site accessible by tracks; no road.	Migratory waterfowl, shorebirds		
M-321.7	Foundation Island	Exclusion - Prevent oil from hitting shoreline of island, extremely valuable migratory bird areas.	(2) 500'	Chevron exclusion on East end of island, 500' for each leg.	Hood Park	Hood Park launch area. Boat access only.	Critical waterfowl and shorebird nesting and brooding area (geese, herons,cormorants, shorebirds). Salmonid concentrations and habitat.		
M-319.8	Entrance to Casey Pond.	Exclusion - Protect inner shallow waters of wildlife refuge.	100'	Use 100' of exclusion boom across opening in railroad trestle.		Access from testle or by boat - primitive boat ramps in refuge.	Salmonid concentrations and habitat, warm water fishery and spawning, recreational fishery, waterfowl, shorebirds, sensitive nesting species.		
M-318.25	South tip of Corps of Engineers Habitat Management Area.	Deflection - Protect marshlands, shallow water habitat inside fefuge.	500'	Use 1 section (500') of deflection boom angled to the Southwest - keep oil in main channel of the Columbia River		Boat ramp at the SE end of the pennisula; gated road to the end of the point.	Migratory waterfowl, shorebirds, fisheries habitat.		
M-316.9	Badger Island	Exclusion - Prevent oil from hitting shoreline of island, extremely valuable migratory bird areas.	(2) 500'	Chevron 2 sections (500' each) of exclusion boom on North end of island, 500' for each leg.		Access by boat only.	Critical waterfowl and shorebird nesting and brooding area.		

VILLARD POND TO HOVER PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-316.75	Inlet south of Hover on the west side of the Columbia River.	Exclusion - Prevent oil from entering shallow water area.	900' Exclusion	Use 900' of exclusion boom from spit to point on south side of inlet.		No road access - need to implement from boat.	Salmonid concentrations and habitat; Hover Park.	(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
M-318	Entrance to Inlet leading to Casey Pond - Mcnary Wildlife refuge.	Enhanced skimming - Protect marshlands, shallow water habitat inside refuge.	200' - 500' leg.	Use skimmers with boom legs to skim area.	Self-contained.	Access from ramps in Pasco, or Hood Park at refuge.	Migratory waterfowl, shorebirds, fisheries habitat.		

McNary Pool
RM 317-323
Villard Pond to Hover

Proposed Booming and Collection Strategies



Legend

- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

Next Map Next Map

N
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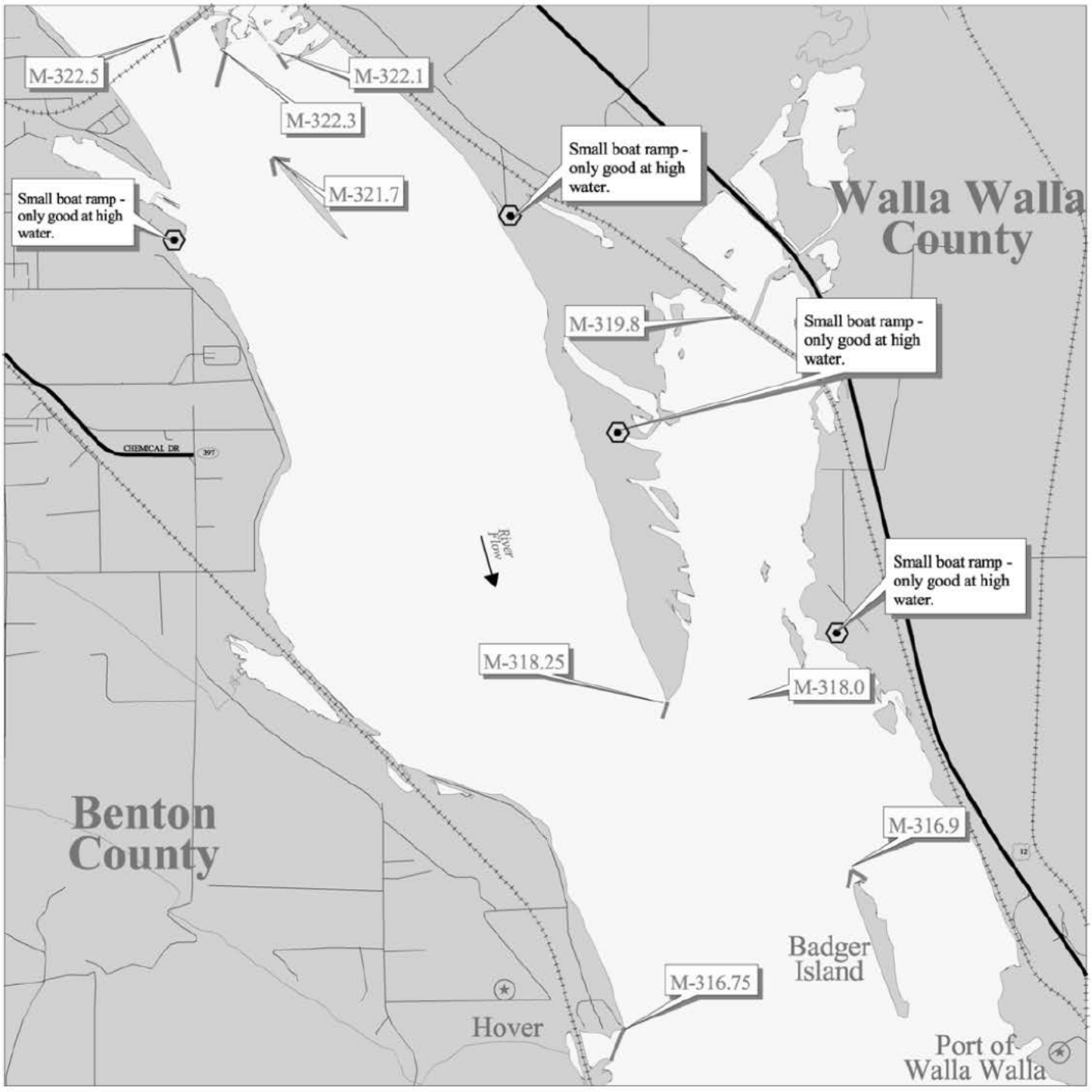
5000 0 5000 10000 Feet



WALLA WALLA RIVER - BADGER ISLAND PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-313.8	Walla Walla River	Exclusion - Close off mouth of the Walla Walla River.	500'	Use 500' of exclusion boom across railroad trestle at the mouth of the Walla Walla River.	Grain elevator area could be used for staging - south side of river mouth.	Road access to mouth possible.	Fish and wildlife resources at the mouth of the Walla Walla River	(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
M-314.3	Near Wallula State Park.	Enhanced skimming - Prevent oil from continuing further downstream - protect resources at M-313.8.	(2) 200'	Use skimmers in addition to 2 sections (200' each) of boom for enhanced skimming at the two natural collection areas.	Port Kelley	Boat ramp and marina at Port Kelley. Road access along bank.	Fish and wildlife resources at the mouth of the Walla Walla River		

McNary Pool
RM 313-317
Badger Island to Walla Walla River

Proposed Booming and Collection Strategies

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Legend
- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

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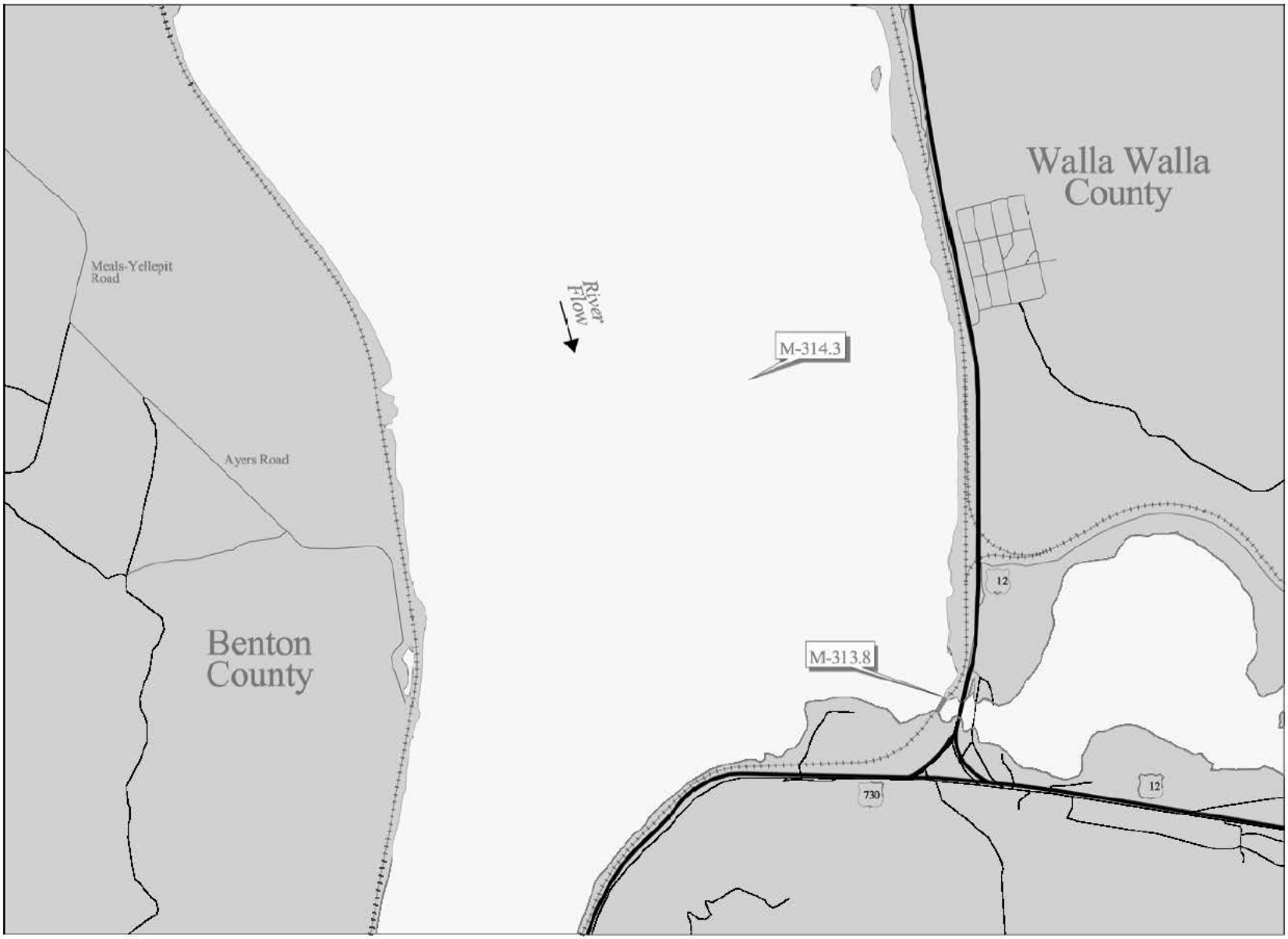
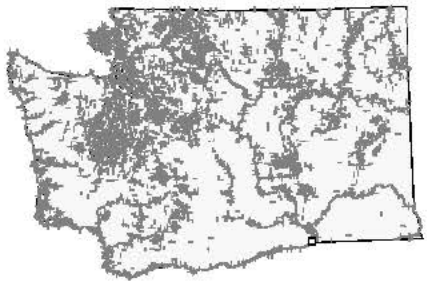


PORT KELLEY TO JUNIPER CANYON PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
		No Strategies Identified							
SKIMMING STRATEGIES									
M-311.0	Port Kelley	Skimming - Prevent oil from continuing further downstream or settling out.	(2) 400'	Use enhanced skimmingskimmers at the natural collection area.	Port Kelley	Boat ramp and marina at Port Kelley. Road access along bank.	Downstream resources.	(b) (7)(F), (b) (3)	

McNary Pool
RM 310-313
Port Kelley to Juniper Canyon

Proposed Booming and Collection Strategies



Legend

- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

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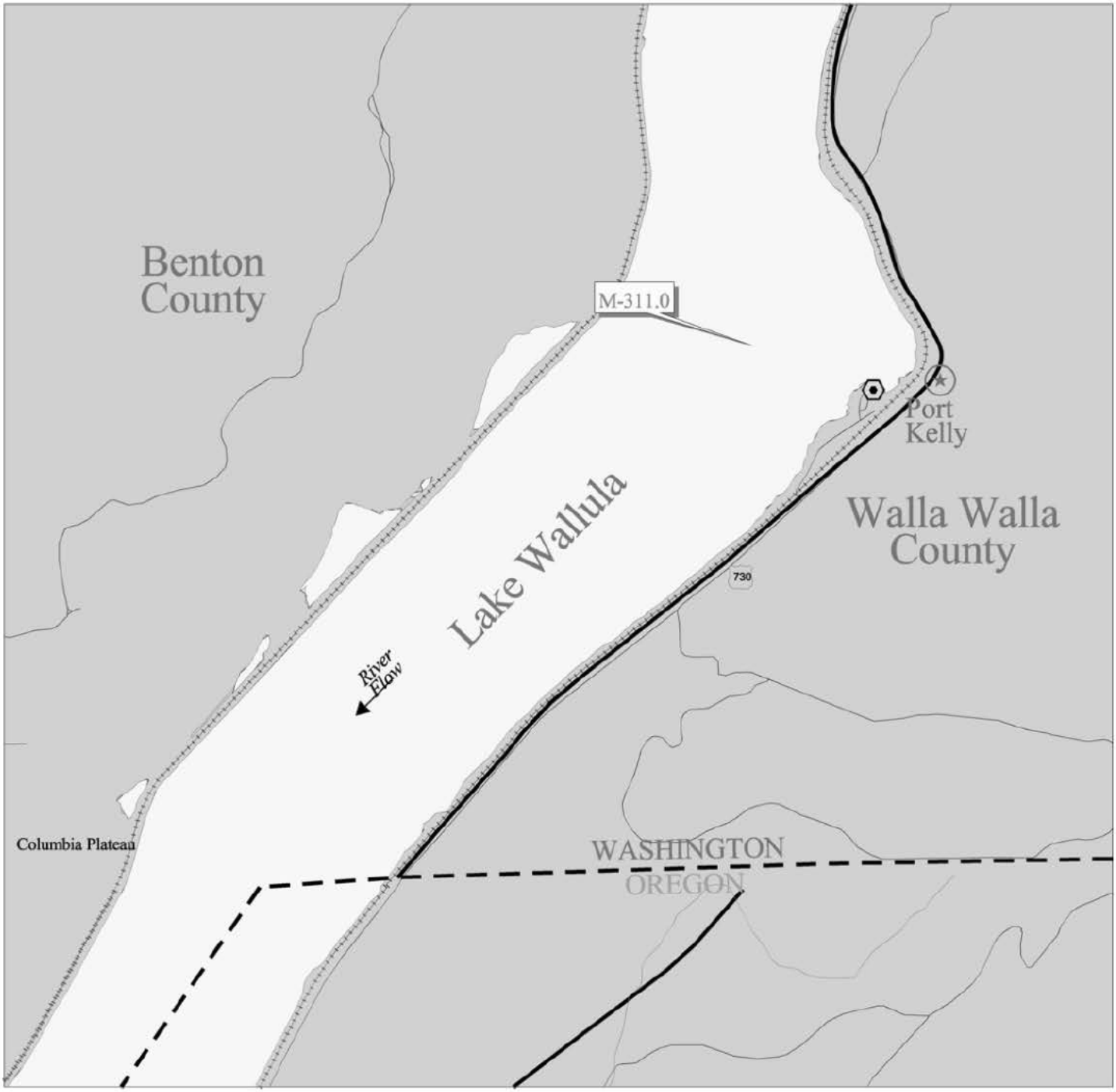
4000 0 4000 8000 Feet



JUNIPER CANYON PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-304.6	Juniper Canyon	Exclusion - Prevent oil from entering wetlands area in Juniper Canyon.	300'	use 300' of exclusion boom outside railroad trestle.	Roadside parking lot west of bridge.	Oregon route 730 follows river.	Marsh, shallow water habitat. Corps of Engineers Habitat Management Area.	(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
		No Strategies Identified							

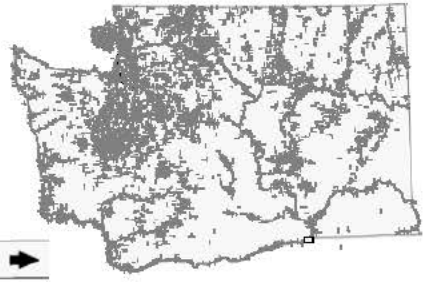
McNary Pool
RM 305-310
Juniper Canyon

Proposed Booming and Collection Strategies

4000 0 4000 8000 Feet

Legend
- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

N W E S



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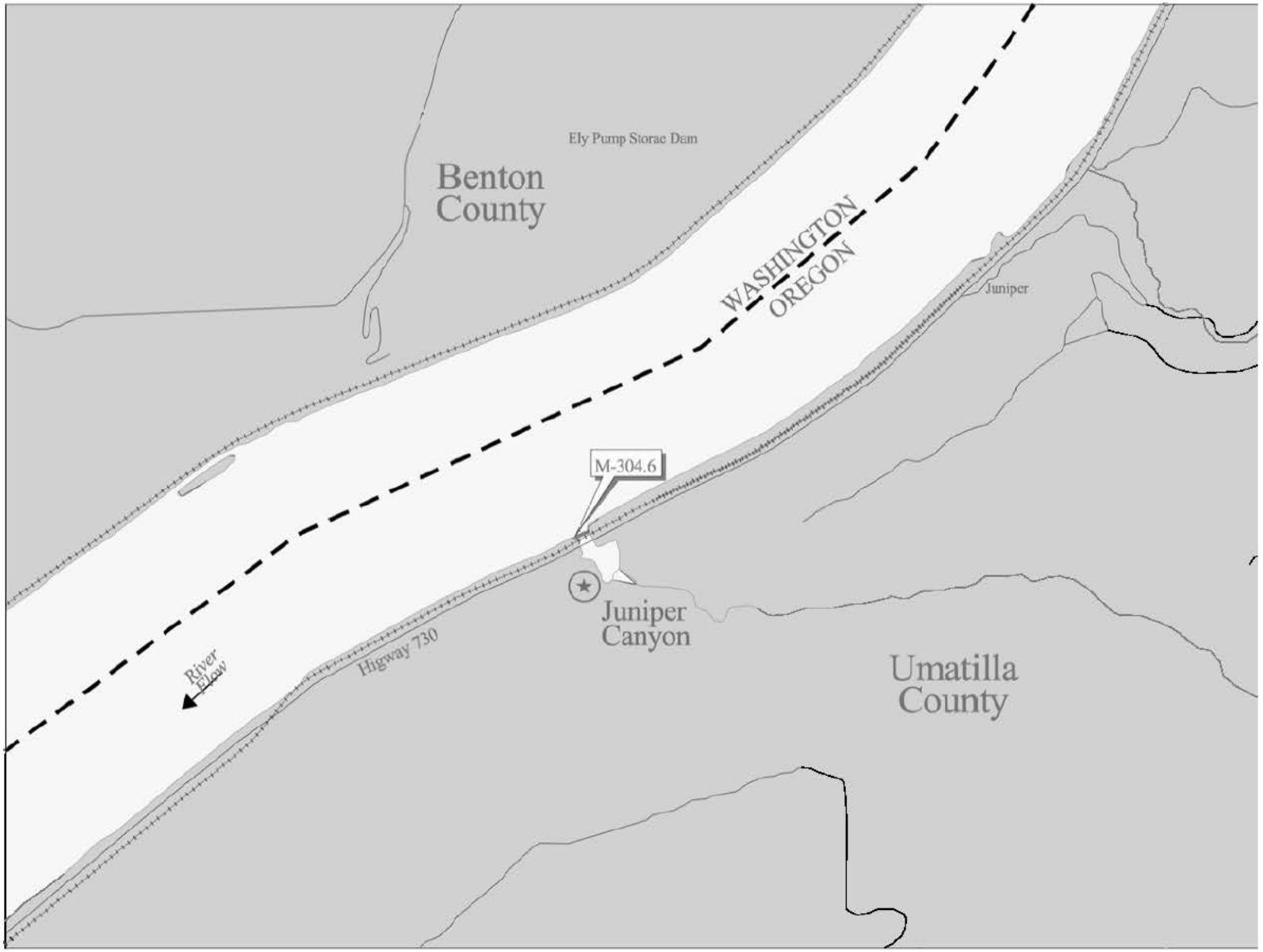

LAKE WALLULA TO HAT ROCK PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-300.28 M-300.2	Point on south shore opposite Spukshowski Canyon.	Deflection - Prevent oil from entering shallow water habitat on Oregon side of river.	(2) 500'	Use 2 sections (500' each) of deflection boom to send oil into main Columbia River channel.	Hat Rock State Park	Boat access ti set up boom. Boat ramp at Hat Rock State Park.	Shallow water habitat.	(b) (7)(F), (b) (3)	
M-300.05	Point NE of Cold Springs Junction.	Deflection - Prevent oil from entering shallow water habitat on Oregon side of river.	1000'	Use 1000' of deflection boom to send oil into main Columbia River channel.	Hat Rock State Park	Boat access ti set up boom. Boat ramp at Hat Rock State Park.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		
M-299.8	First island north of Cold Springs Junction.	Exclusion - Prevent oil from enteing shallow water habitat on Oregon side of river.	500'	Use 500' of exclusion boom to send oil into main Columbia River channel.	Hat Rock State Park	Boat access may be needed to set up boom. Ramp at Hat Rock State Park. End of road facing island from Cold Springs Junction.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		
M-299.4	NE point of peninsula jutting out, north of Cold Springs Junction.	Exclusion - Prevent oil from enteing shallow water habitat on Oregon side of river.	2000'	Use 2000' of exclsuion boom to close off shallow water entrances and send oil into main Columbia River channel.	Hat Rock State Park	Road from Cold Springs Junction goes part way out to end of spit.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		
M-299.05 M-298.7	The two largest islands east of Hat Rock State Park.	Exclusion - Prevent oil from enteing shallow water habitat on Oregon side of river.	(1) 700' 300' (1)	Use 1000' of exclusion boom to send oil into main Columbia River channel.	Hat Rock State Park	Boat access only from Hat Rock State Park boat ramp.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		
M-298.45	Passageways between the two large islands east of Hat Rock State Park.	Exclusion - Prevent oil from entering shallow water habitat on Oregon side of river.	500'	Use 500' of exclusion boom in between islands.	Hat Rock State Park	Boat access only from Hat Rock State Park boat ramp.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		
M-298.3	Passageways between the two large islands east of Hat Rock State Park.	Exclusion - Prevent oil from entering shallow water habitat on Oregon side of river.	500'	Use 500' of exclusion boom in between islands.	Hat Rock State Park	Boat access only from Hat Rock State Park boat ramp.	Shallow water habitat, waterfowl, shorebird nesting and wintering areas.		

LAKE WALLULA TO HAT ROCK PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-297.6	Hat Rock State Park (Inlet).	Exclusion. Keep oil out of inlet at Hat Rock State Park.	1000'	Use 1000' at entrance for exclusion.	Hat Rock State Park	For deflection, boat access needed from Hat Rock State Park boat ramp.	Hat Rock State Park	(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
		No Strategies Identified							

McNary Pool
RM 297-305
Lake Wallula to Hat Rock

Proposed Booming and Collection Strategies

Legend
- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

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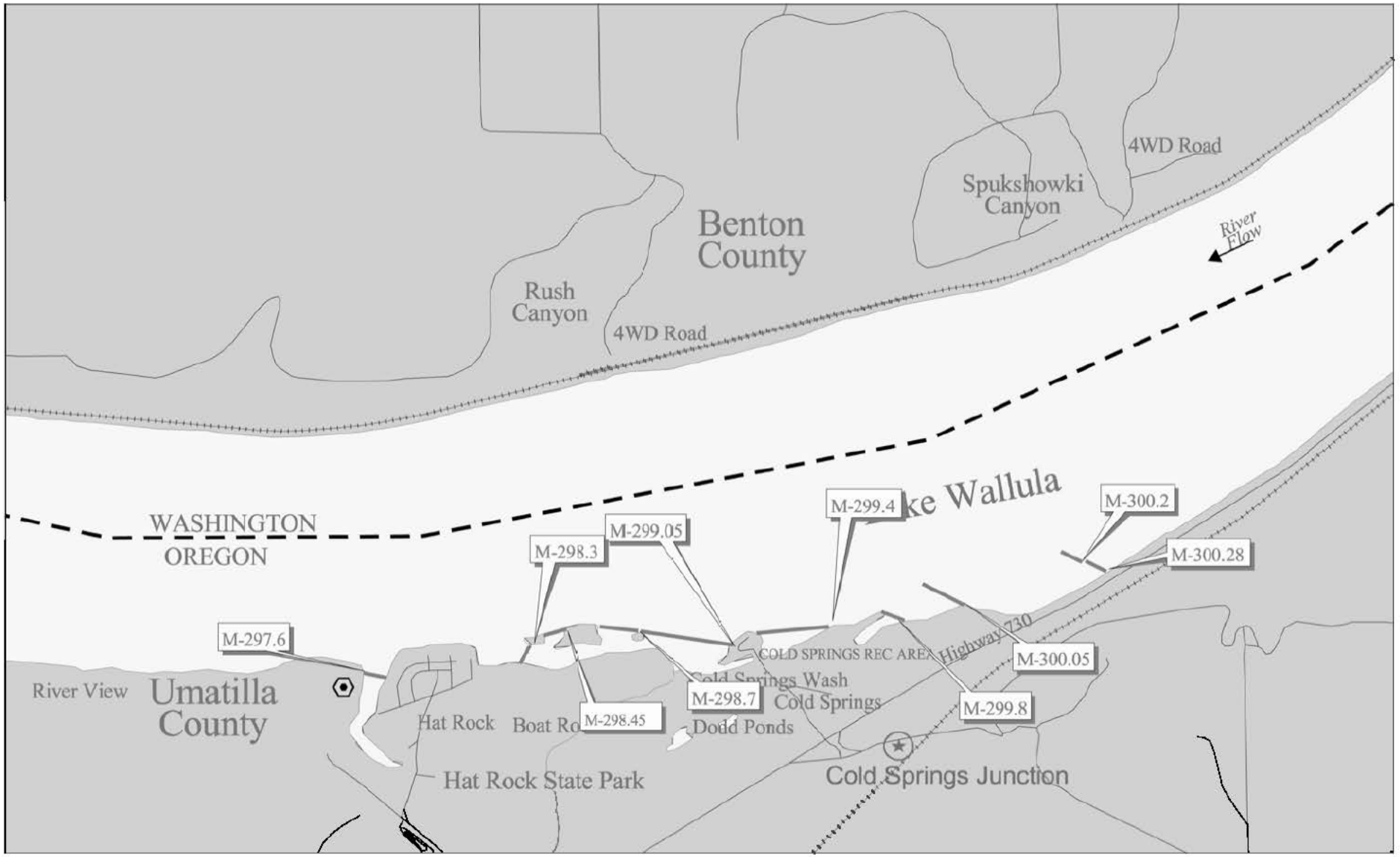
4000 0 4000 8000 Feet



McNARY DAM PROPOSED BOOMING AND COLLECTION STRATEGIES

Strategy Number	Location	Response Strategy	Length and Type of Boom	Strategy Implementation	Staging Area	Site Access	Resources Protected	Longitude Latitude	Verified
BOOMING STRATEGIES									
M-291.6	McNary Dam	Call USACE dam control center Walla Walla District to close fish ladder.						(b) (7)(F), (b) (3)	
SKIMMING STRATEGIES									
		No Strategies Identified							

McNary Pool
RM 292-297
McNary Dam

Proposed Booming and Collection Strategies

4000 0 4000 8000 Feet

Legend
- Town or City
- Boat Launch
- Hatchery
- Boom Location
- Highway
- Local Road
- Rail Road

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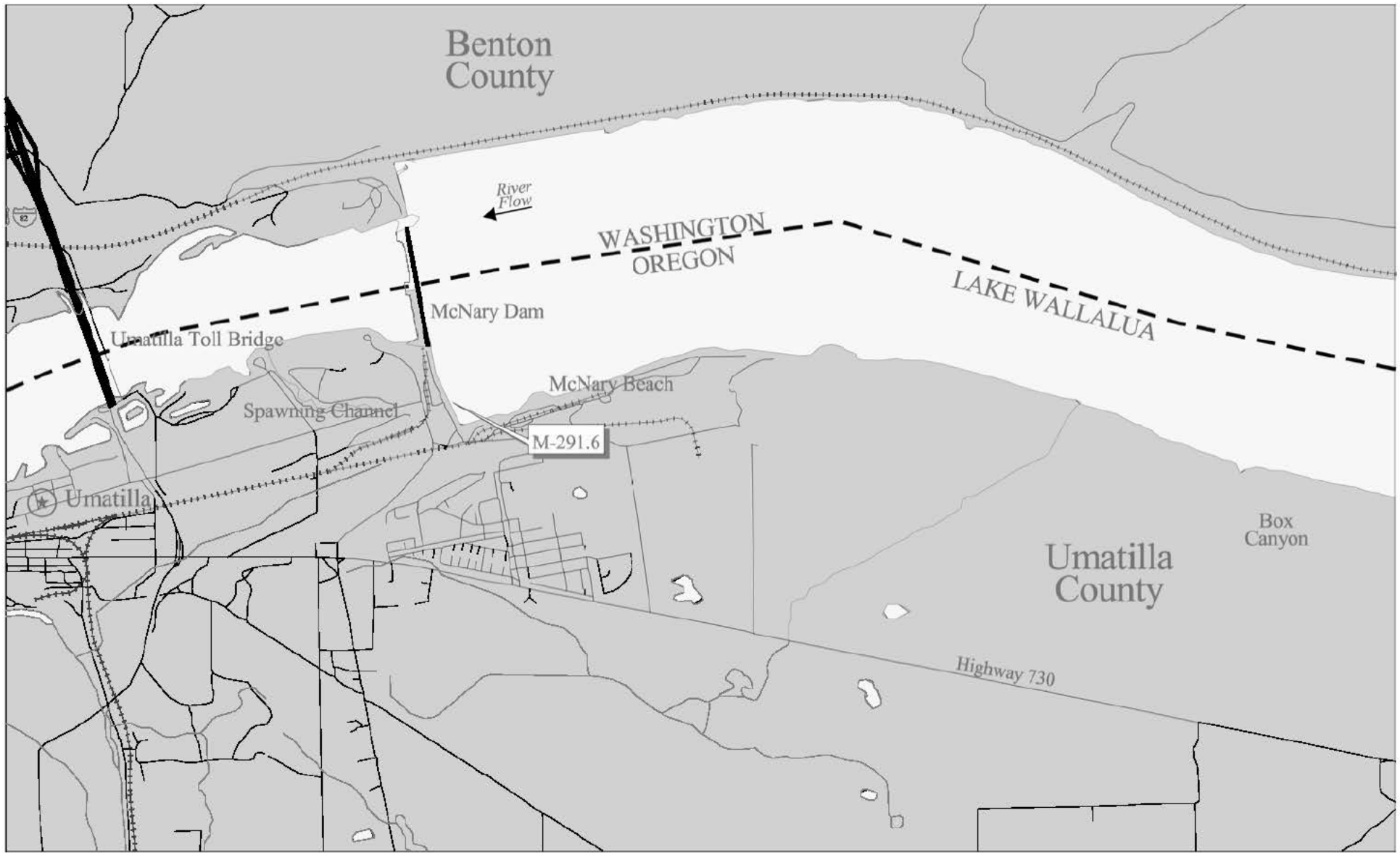

4.4. Strategy Tear Out Sheets

Not available at this time.

5. Shoreline Information

5.1. Shoreline Types and Sensitivity

The type of shoreline, degree of exposure to waves and currents, and biological sensitivity are the main criteria for selecting appropriate treatment techniques. Each shoreline type has particular properties (including vegetation types) which facilitate or resist the penetration and persistence of oil. Areas of comparatively uniform sediment type and grain size experience a deeper penetration of oil. Grain size definitions are:

Mud	<0.0625 mm
Fine Sand	0.0625 - 2 mm
Medium to Coarse Sand	2 -4 mm
Pebble/Cobble	4 - 256 mm

Persistence of oil in a particular area is directly related to the intensity of wave action, tides, and currents. Based on numerous oil spill studies of shoreline characteristics, treatment, and oil impact, the matrices referred to in Section 5.3 were formulated following the basic prototype of the Environmental Sensitivity Index Atlas.

The environmental sensitivity index (ESI) system ranks coastal environments on a scale of 1-10 or 11 (less sensitive to more sensitive) with respect to oil spill sensitivity and potential biological injury is being used for mapping extensive areas of the coastline of the U.S.. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, rank low on the scale while sheltered areas have the highest ranking. The shoreline types used in this manual are a combination of the two similar systems used for the Delaware/Pennsylvania/New Jersey ESI Atlas, and the Maryland and Virginia atlases. The numbering system for the Countermeasure Manual Shoreline Types does not correspond exactly to either atlas; however, the corresponding shoreline types can be identified easily from the ESI maps and reassigned the appropriate number (after field verification.) The shoreline ranking system provides a useful first step in the design of contingency plans because it identifies the priority areas that require maximum effort for protection and cleanup. Strike teams and contractors with this document can focus their activities on environmental priorities, particularly during the first few hours and days of the spill.[1]

[1]Regional Response Team III. Draft, *Shoreline Countermeasures Manual*. (Departmentof the Interior, March 22,1991).

5.2. Shoreline Maps

Not available at this time.

5.3. Oil Countermeasure Matrix

The Northwest Area Committee has developed a manual and a series of matrices as a tool for shoreline countermeasure response. The shoreline countermeasures matrices and manual can be found in the main body of the Northwest Area Contingency Plan.

Shoreline countermeasures following an oil spill are a critical element in determining the ultimate environmental impact and cost resulting from a spill. Local response organizations and agencies have developed mechanisms for identifying shorelines requiring treatment, establishing treatment priorities, monitoring the effectiveness and impacts of treatment, and for resolving problems as the treatment progresses.

Each section of the manual has been adapted to the specific environments, priorities, and treatment methods appropriate to the planning area. These elements provide the information needed to select cleanup methods for specific combinations of shoreline and oil types. Local information on shoreline types (Discussed in Chapter 2) can be obtained from Environmental Sensitivity Index (ESI) atlases prepared by NOAA for northern and southern Puget Sound, the Washington & Oregon coast, and the Columbia River.

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6. Sensitive Resource Description

6.1. Wildlife

Because moisture is limited in much of the lands surrounding the project area, the waters provided by the Columbia River provide an important part of the food, water and cover for numerous wildlife species. Wildlife that typically use the riparian and wetland areas associated with the project area can be divided into seven main groups: waterfowl, raptors, upland game birds, aquatic furbearers, big game, other wildlife groups, and threatened and endangered species.

Waterfowl

Wintering waterfowl are probably the most abundant wildlife resource. Canada geese are seen in the greatest numbers. Various duck species can be found concentrated in around the Umatilla National Wildlife Refuge. Bonneville Pool supports the fewest numbers of wintering waterfowl. Winter concentrations of diving ducks can be found throughout the pool. Adjacent lakes, marshes, and backwaters are important foraging and loafing areas for wintering waterfowl. Up to 168 goose nests were located in 1991. The nests were primarily located along reservoir islands. The Dalles Pool is primarily associated with reservoir islands and used extensively by nesting Canada geese and wintering ducks and geese. In 1991, 117 goose nests were recorded. The majority of the nesting occurs on Brown's, Little Miller, and Rufus Islands. Most geese with broods feed along park lawns, grass-forb communities adjacent to the river, embayments, and backwater areas.

Raptors

Riparian forests and wetlands in the project area provide perching and nesting opportunities and concentrated prey for the osprey, northern harrier and bald eagle. Osprey nesting is confined principally to the Bonneville Pool Area. Approximately 10-12 osprey nest sites are found along the Oregon and Washington shores of Bonneville Pool. Other nests are known to occur within the Columbia River Gorge. Most nesting occurs along the shoreline and near shallow bays or inlets. Cliffs and large trees along river banks typically support diverse raptor populations. Cliff areas in proximity to the river provide potential nest and roost sites for golden eagles, and prairie falcons. Large trees near Umatilla NWR provide important nest sites for Swainson's hawk, red-tailed hawk, great horned owl, and northern pygmy owl. Large cottonwoods and dense stands of Russian olive provide nesting habitat for up to eight species of raptors.

Upland Game Birds

Riparian and wetland areas associated with the area provides habitat for upland game birds. Although these birds are generally associated with upland area, they also use riparian areas for water, food, shade, and nest cover. Riparian vegetation provides nesting cover and winter food sources for wild turkey, ruffed grouse, and ring-necked pheasant. Wild turkeys can be found in riparian stands near Bonneville. Ruffed grouses can be found in riparian habitat primarily located at the lower end of the Bonneville Pool. Grouse use riparian areas for water and brood rearing

Aquatic Furbearers

Aquatic furbearers occur in each dam pool. They include muskrat, beaver, river otter, and mink. In general this group is dependent on riverine areas, embayments, ponds, tributaries, and riparian forests for den sites and foraging areas. The presence of a water barrier around den sites provides essential protection from predators, and is especially important when young are present in the early spring and summer.

Beaver is strongly associated with the presence of cottonwood and protected areas such as embayments, inlets, ponds, and sloughs. Muskrats are particularly abundant in embayments and sloughs where aquatic plants are also abundant. Mink and river otter use the project reservoirs, ponds, sloughs, and backwater areas for foraging and denning.

Big Game

Black-tailed deer, and mule deer are the most common big game inhabiting the project area. Black-tailed deer and mule deer associated with Bonneville and The Dalles pools are not numerous.

Other Wildlife

The project reservoirs provide essential habitat for numerous reptiles, amphibians small mammals, bats, colonial nesting birds, shorebirds, and songbirds. In general, riparian and wetland areas support higher population densities and species number than dryland shrub-steppe, talus, cliff, and/or grassland habitat, which are also prevalent along the project reservoirs. Habitat associated with the river generally support trees or dense grass-forb cover that provide more structurally complex areas and more abundant forage resources than adjacent uplands.

Shallow-water areas, embayments, shorelines, riparian area, and wetlands associated with the project reservoirs provide important foraging and nesting habitat for shorebirds and colonial birds. Nine great blue heron rookeries, ranging in size form 2 to 555 nesting pairs, and 3 nesting colonies (10 to 30 pairs) of black-crowned night herons, forage and nest along the main channel and backwater areas of the Columbia River.. Pied-billed grebes, and rail species use many of the backwater areas throughout the project area. Killdeer, and spotted sandpiper nest and forage just up slope from the high pool line and along the shoreline throughout the project area. In addition over 1,000 white pelicans, typically occur along the Columbia River from Boardman, to Vernita Bridge. A number of insectivorous species that inhabit riparian and wetland areas are present in substantial numbers throughout the project area. These species include various woodpeckers, warblers, flycatchers, common nighthawks, and bats and other small mammals.

Threatened and Endangered Species

Bald eagles are opportunistic foragers, thus, their diets vary considerably both spatially and temporally. Bald eagles in the Pacific Northwest primarily consume fish, waterfowl, jack rabbits, and a variety of carrion. The nesting season for bald eagles generally extends from mid-February through August. Bald eagle nests are invariably located in proximity to water, within one mile of a large body of water. Currently, one bald eagle nest site is located on the Columbia River immediately above Bonneville Dam. The project area supports relatively high concentrations of wintering bald eagles. Over 25% of the wintering bald eagles in the lower 48 states occur in the Pacific Northwest. The wintering period for bald eagles in the Northwest occur from approximately November through March. A 1990 survey indicated that approximately 40 eagles wintered at Umatilla NWR and 15 elsewhere on the Columbia River. In Washington, Peregrines feed almost exclusively on avian prey captured in flight, including ducks, upland game birds, shorebirds, and small perching birds. The peregrine falcon may forage in wetlands and riparian areas associated with the project. One pair nests approximately 5 miles downstream of Bonneville Pool; four pairs nest between Bonneville and The Dalles pools; and one pair nests immediately above The Dalles. Peregrine falcons may occasionally use portions of the project area during migration as well. Wintering areas most commonly used occur along the coast.

6.2. Fish

The Columbia River is used for rearing and transportation by many fish stock groups. A brief description of these fish groups can be found on the following pages.

The focus of response in the event of a spill of oil or hazardous materials into the Columbia River should be the protection of the juvenile populations and the food web that supports them. Juvenile fish rear and feed in a shallow water environment, and are not sufficiently mobile to escape the effects of oil. The major food source for all juvenile fish is also located in this environment. Destroying this habitat can have a devastating effect on the survival of juvenile populations thereby impacting the survival of the total fish population and ultimately other organisms that depend on these fish for food. Oil spill response strategies should include priority protection of shallow water habitat.

Coho (Silver) Salmon

Adult Coho enter the Columbia River for their spawning areas starting in late August and lasting until December. The major migration occurs from August to mid September. Rearing takes place in smaller tributaries of this region. Juvenile coho spend about a year in the stream where they were spawned. They feed primarily on zooplankton and emerging insects. Juveniles outmigrate quickly from April to June utilizing shoreline cover and open waters.

Chinook (King) Salmon

Spring chinook: (listed - Snake River Only)

Adult Spring chinook begin entering the Columbia River in February and pass through the Bonneville to Pasco area by July. The major migration occurs from early April through mid June. Spawning occurs above the dams in Snake river tributaries. Young chinook feed on aquatic insect larvae, terrestrial insects, and small invertebrates. Juveniles outmigrate/rear as yearlings from March through June. The major outmigration passes the project area in April and May. They utilize a deep water environment but are dependent upon benthic prey.

Summer chinook: (listed - Snake River Only)

Adult summer chinook begin entering the Columbia River in May and pass through the Bonneville to Pasco area by September. The major migration runs from mid-June through mid-August. The spawning regions for the summer chinook are in the Snake River tributaries. Juveniles outmigrate from the Snake River as fingerlings primarily from March through June; the major migration occurs in April and May. Some fingerlings from the Spring and summer runs may stay in the river up to 1½ years before migrating to the ocean. Upper Columbia River smolts outmigrate from May to September. The majority pass the dams from June through early August.

Fall chinook: (listed - Snake River Only)

Adult fall-run chinook begin entering the Columbia River in July and pass the mainstem dams by the end of November. The majority pass from mid-August to November. There are two basic races of fall chinook - tules and upriver- brights. Tules spawn in September. Most spawning above Bonneville Dam is done by hatchery fish. Most natural spawning occurs in tributaries of the Bonneville Pool. Some of the wild-spawned tule fry rear in the shallow water of the reservoir until they migrate in the spring. Juvenile migration takes place June through October with the majority passing the dams in July and August.

Upriver-brights are a late-spawning, November through January, upriver variety including hatchery and wild fish. Wild stock rear in shallow water rapids within the dam reservoirs pools. Some upriver brights rear during the outmigration, particularly in Lake Umatilla above John Day Dam. Fall chinook that rear in the Snake river outmigrate before mid July because of the warm water temperature. Juvenile outmigration takes place at approximately the same time as the tules, June through October with the majority passing in July and August.

Sockeye Salmon

Adult sockeye begin entering the Columbia River in April and continue through October. The major passage occurs from June through early August. All sockeye in the Columbia River System are wild stock. Sockeye require spawning grounds in streams lying adjacent to lakes. After the eggs hatch, juveniles migrate to a lake and spend 1 to 3 years there before they outmigrate to the ocean. Juvenile outmigration takes place in spring, May and June, of their second or third year.

Steelhead Trout

Steelhead can be found in the Columbia River year round. There are two runs for steelhead, Summer and Winter.

Summer steelhead found in the Bonneville to Pasco region of the Columbia River enter the Columbia River beginning in February and continue through December. Summer run fish migrate to the upper reaches of the Columbia and Snake Rivers where they spend the winter. In the spring, they move to their home streams to spawn. The majority migrate from mid June through October.

Winter steelhead migration begins in November and continues through April. Steelhead often overwinter in the mainstem reservoirs, including tributaries of the Bonneville Pool, and pass the projects in the early spring. Juvenile outmigration occurs in March through June. The majority pass in April and May.

American Shad

Shad enter the Columbia River April through August. The major run takes place mid-May through July. They spawn in the open water of the mainstem reservoirs during July and early August, with peak spawning times running from July 20th to August 2nd. Rearing takes place in productive shallow-water zones of the reservoirs until juveniles are ready to outmigrate. As with most fish groups, young fish are very susceptible to oil in the water. Juvenile shad spend the summer in fresh water and outmigrate as subyearlings from October through December. Peak migration is during late October and early November.

White Sturgeon

White sturgeon are found above and below Bonneville Dam. They like deep areas and are bottom feeders. Sturgeon can live their entire life in fresh water. They spawn from April through July. All life stages would be susceptible to the oil in the water. Like the salmon, juveniles are dependent upon corophium for food.

Lamprey

Adult Pacific lamprey begin their migration up the Columbia River in April and continue through August. The majority pass the Bonneville to Pasco area from May through mid-July. Spawning typically occurs June through July. Spawning areas are sandy bottoms in the upper ends of pools of small tributary streams. Juveniles emerge and drift downstream to burrow in the mud in low-velocity reaches of small tributary stream.
When juveniles become 5-6 years old, they outmigrate to the sea. Outmigration takes place form April through mid-July. The majority pass the dams in May and June.

Other Resident Fish

Other resident fish, including small-mouthed bass and walleye, can be found in the waters of the Columbia year round. These fish rear in slower side water pools where there is more cover and a slower water flow rate. Juveniles would be most vulnerable to the effects of an oil spill from April through August.

6.3. Flight Restriction Zones/ Sensitive Wildlife

Flight restriction zones have been designated in the GRP to minimize disturbance to certain wildlife species. An identified location could represent a heron colony or the individual nest of a sensitive species such as bald eagle. While some zones may be restricted year around, others will be in effect only during the months listed in the matrix.

The no-fly bubble is the area within a 1,500 foot radius and below 1,000 feet in altitude around the location.

All aircraft, including those from the government, contractors or media, are expected to avoid these zones when restrictions are in effect. In the event that one of these zones must be entered during a spill response in

the Bonneville Pool, clearance must be obtained from the Washington Department of Fish and Wildlife (WDF&W) and the United States Fish and Wildlife Service (USFWS.

During oil spills, pilots are also asked to avoid disturbing any large concentrations of birds and other wildlife. By keeping a safe distance or altitude, pilots can prevent the accidental hazing of unaffected wildlife into oiled areas and minimize the risk of aircraft/ bird collisions.

6.4. Hazing

Hazing or directed harassment, is a method used to drive or herd wildlife out of an area where they are at risk of becoming oiled. Hazing techniques include the use of visual and audio devices, personnel for herding, vessels and aircraft. In the right circumstances it can be an effective tool for protecting some wildlife species. In other cases it can be disastrous as unaffected wildlife can be driven into oiled areas, or forced to abandon nests or young.

Before hazing can begin for all species of wildlife in the Dalles Pool, clearance must be obtained from the Washington Department of Fisheries and Wildlife and the United States Fish and Wildlife Service. All hazing efforts during a spill will be directed by these agencies. The deliberate harassment of wildlife without first securing permission from these agencies is a violation of Federal and State laws.

The following information must be provided for a determination on whether hazing might be authorized in a given situation.

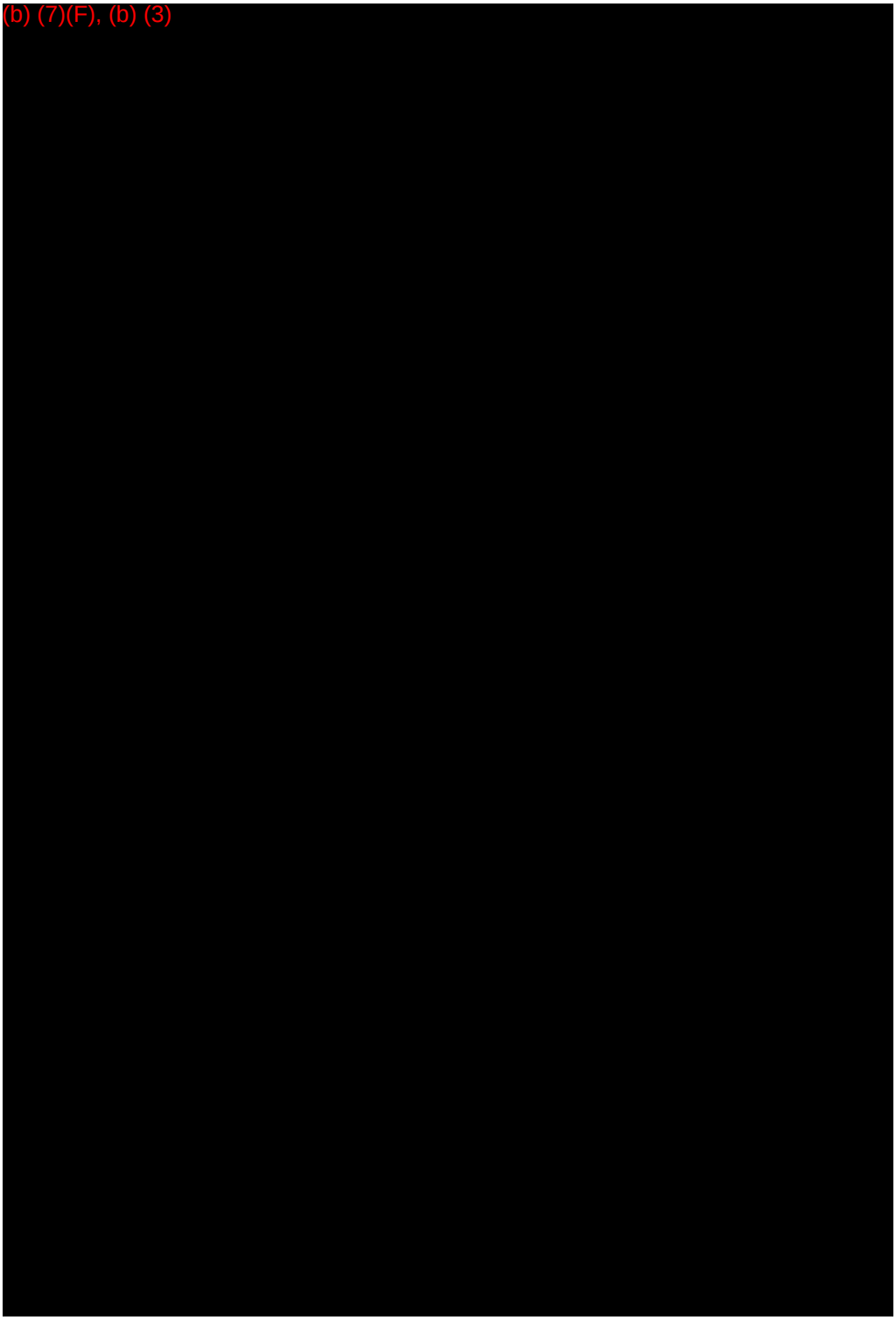
1. Description of the situation where hazing authorization is being sought
2. Location to be hazed
3. Species of wildlife to be hazed and number of animals
4. Methods and equipment used
5. Date and time of hazing
6. Name, phone number, radio frequency, pager number and the amount of hazing experience of the individual requesting permission

The responsible agencies will evaluate each request on a case by case basis. All hazing of marine mammals, threatened and endangered species, and all hazing by aircraft will be performed only under authority and general supervision of WDF&W, USFWS, NMFS or persons designated by these agencies. Representatives of these agencies can be contacted through the planning section of the Unified Command System during the spill event.

6.6. Downstream Water Users

Water Intake Users: Washington

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



7. Logistical Information

The following is not a complete list of logistical resources - for more information please refer to the Area Contingency Plan, Summary of Area Resources Chapter 6. The subject headings which have an asterisk (*) are being developed; please consult local DEM officials (phone numbers listed on pages 6-53 to 6-55 of the ACP) for specific information.

To submit data for this section, please use Comments/ Suggestions / Changes ("submit comments" page on www.rrt10nwac.com web site).

7.1. Logistical Information

Subject	Name	Characteristics	Contact	Phone #
Command Posts *	Lock & Dam Project (Control Room)			(541)374 -8338
	Bradford Island Visitor Center			
	Scenic Area Office	Hood River, OR		
	Herman Creek Work Center	Cascade Locks, OR		
	Eagle Creek Campground and Overlook			
Communications				
See Pages 6-41 to 6-42				
Equipment Cache Locations				
See Pages 6-2 to 6-45				
Inventory of Local Support Equipment*				
Helicopter Support/ Air Support	Bradford Island (Helo Pad)			
	Cascades Island			

Subject	Name	Characteristics	Contact	Phone #
	Dalles Municipal Airport			
Access Points	Port of Cascade Locks	(OR)		
	Coverts Landing	(OR)		
	Mayer State Park	(OR)		
	Port of Dalles	(OR)		
	Port of Stevenson	(WA)		
	ACOE (below dam)	(WA)		
	Drano Lake	(WA)		
	Bingen Marina	(WA)		
Property Access Information and Contacts *				
Staging Areas	Herman Creek Work Center	Cascade Locks, OR		
	Eagle Creek Campground and Overlook	(OR)		
	Wyeth Campground	(OR)		
	Dog Mountain Trailhead			
Recreational Activities which could interfere *				
Tribal Resources	Yakama Indian Nation			(509)865-5121
	Columbia River Inter-Tribal Law			(800)587-3474
	Umatilla Conf. Tribes			(541)276-4348
	Nez Perce Tribe			(208)843-5501

Subject	Name	Characteristics	Contact	Phone #
	Warm Springs Reservation			(541)553 -3257
Key Local Elected Officials *				
Fire Department	Hood River	Hood River County		(541)386 -5522
	Odell	Hood River County		(541)354 -1032
	Cascade Locks	Hood River County		(541)374 -8434
	The Dalles	Wasco County		(541)298 -1165
	Mosier	Wasco County		(541)478 -3333
	Wasco Rural	Wasco County		(541)296 -9445
	White Salmon	Klickitat County		(509)493 -1166
	Bingen	Klickitat County		(509)493 -2122
	Dallesport	Klickitat County		(509)767 -1176
	Stevenson	Skamania County		(509)427 -5970
	N. Bonneville	Skamania County		(509)427 -8182
	#1 Carson/Stabler Home Valley/Cook	Skamania County		(509)427 -8698
	#2 Stevenson	Skamania County		(509)427 -5456
	#3 Underwood	Skamania County		(509)493 -1710
Local Support Personnel	Klickitat County Sheriff's Dept.	Klickitat County		(509)773 -4545
	White Salmon Police Dept.	Klickitat County		(509)493 -2660

Subject	Name	Characteristics	Contact	Phone #
	Bingen Police Department	Klickitat County		(509)493 -3811
	Skamania County Sheriff's Dept.	Skamania County	Mike Grossie	(509)427 -5626
	Stevenson Police Department	Skamania County		(509)427 -8185
	Hood River Sheriff's Office	Hood River County	Richard Kelly	(509)386 -2711
	Hood River Police Department	Hood River County	Chief Younkins	(541)386 -3942
	The Dalles Police Department	Wasco County		(541)296 -2233
Volunteers *				
Wildlife Rehab Facilities *				
Marinas/Port Docks	Port of Klickitat	Klickitat County	Marc Harvey	(509)493 -1655
	Port of Skamania	Skamania County	Bill Rompa	(509)427 -5484
	Port of Hood River	Hood River County	Jim O'Banion	(541)386 -1645
	Port of The Dalles	Wasco County	Scott Hege	(541)298 -4148
Housing/Feeding/Response Community Support	Skyline Hospital	Klickitat County	211 Skyline Drive, White Salmon	(509)493 -1101
	Hood River Memorial Hospital	Hood River County		
Interim Storage/Permits *				
Fishing Fleets & Affiliated Organizations				

Subject	Name	Characteristics	Contact	Phone #
*				
Boat Cleaning Capability *				
Safe Havens *				

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Appendices

Appendix A: Summary of Protection Techniques

Protection Techniques	Description	Primary Logistical Requirements	Limitations
ONSHORE			
Beach Berms	A berm is constructed along the top of the mid-inter tidal zone from sediments ex-cavated along the downgradient side. The berm should be covered with plastic or geo-textile sheeting to minimize wave erosion.	• Bulldozer/Motor grader -1 • Personnel - equipment operator & 1 worker • Misc. - plastic or geotextile sheeting	• High wave energy • Large tidal range • Strong along shore currents
Geotextiles	A roll of geotextile, plastic sheeting, or other impermeable material is spread along the bottom of the supra-tidal zone & fastened to the underlying logs or stakes placed in the ground.	• Geotextile - 3 m wide rolls • Personnel - 5 • Misc. - stakes or tie-down cord	• Low sloped shoreline • High spring tides • Large storms
Sorbent Barriers	A barrier is constructed by installing two parallel lines of stakes across a channel, fastening wire mesh to the stakes & filling the space between with loose sorbents.	Per 30 meters of barrier • Wire mesh - 70 m x 2 m • Stakes - 20 • Sorbents - 30 m^2 • Personnel - 2 • Misc. - fasteners, support lines, additional stakes, etc.	• Waves > 25 cm • Currents > 0.5 m/s • Tidal range > 2 m
Inlet Dams	A dam is constructed across the channel using local soil or beach sediments to exclude oil from entering channel.	• Loader - 1 • Personnel - equipment operator & 1 worker or several workers w/shovels	• Waves > 25 cm • Tidal range exceeding dam height • Freshwater outflow

NEARSHORE			
Containment Booming	Boom is deployed in a "U" shape in front of the oncoming slick. The ends of the booms are anchored by work boats or drogues. The oil is contained within the "U" & prevented from reaching the shore.	For 150 meters Slick: • Boom - 280 m • Boats - 2 • Personnel - boat crews & 4 boom tenders • Misc. - tow lines, drogues, connectors, etc.	• High winds • Swells > 2 m • Breaking waves > 50 cm • Currents > 1.0 m/s
Exclusion Booming	Boom is deployed across or around sensitive areas & anchored in place. Approaching oil is deflected or contained by boom.	Per 300 meters of Boom • Boats - 1 • Personnel - boat crew & 3 boom tenders • Misc.- 6 anchors, anchor line, buoys, etc.	• Currents > 0.5 m/s • Breaking waves > 50 cm • Water depth > 20 m
Deflection Booming	Boom is deployed from the shoreline away from the approaching slick & anchored or held in place with a work boat. Oil is deflected away from shoreline.	Single Boom, 0.75 m/s knot current • Boom - 60 m • Boats - 1 • Personnel - boat crew + 3 • Misc. - 3 anchors, line, buoys, recovery unit	• Currents > 1.0 m/s • Breaking waves > 50 cm
Diversion Booming	Boom is deployed from the shoreline at an angle towards the approaching slick & anchored or held in place with a work boat. Oil is diverted towards the shoreline for recovery.	Single Boom, 0.75 m/s knot current • Boom - 60 m • boats - 1 • Personnel - boat crew + 3 • Misc. - 3 anchors, line, buoys, recovery unit	• Currents > 1.0 m/s • Breaking waves > 50 cm
Skimming	Self-propelled skimmers work back & forth along the leading edge of a windrow to recover the oil. Booms may be deployed from the front of a skimmer in a "V" configuration to increase sweep width. Portable skimmers are placed within containment booms in the area of heaviest oil concentration.	Self-propelled (None) Towed • Boom - 200 m • Boats - 2 • Personnel - boat crews & 4 boom tenders • Misc. - tow lines, bridles, connectors, etc. Portable • Hoses - 30 m discharge • Oil storage - 2000 liters	• High winds • Swells > 2 m • Breaking waves > 50 cm • Currents > 1.0 m/s

SECTION 7
SUSTAINED RESPONSE ACTIONS

Last revised: 02/24/2014

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7.1 Response Resources

7.1.1 Response Equipment

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

7.1.2 Response Equipment Inspection and Maintenance

7.1.3 Contractors, Contractor Equipment, and Labor

7.1.4 Command Post

Figure 7.1-2 - Command Post Checklist

7.1.5 Staging Area

7.1.6 Communications Plan

Figure 7.1-3 - Communications Checklist

7.2 Site Security Measures

Figure 7.2-1 - Site Security Checklist

Figure 7.2-2 - Facility Security

7.3 Waste Management

Figure 7.3-1 - Waste Management Flow Chart

Figure 7.3-2 - General Waste Containment and Disposal Checklist

7.3.1 Storage

Figure 7.3-3 - Temporary Storage Methods

Figure 7.3-4 - Facility-Specific Disposal Locations

Figure 7.3-5 - Interim Storage

SECTION 7
SUSTAINED RESPONSE ACTIONS, CONTINUED

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7.4 Public Affairs

Figure 7.4-1 - Media Statement

7.5 Liability Claims

Figure 7.5-1 Liability Claims Forms

7.1 RESPONSE RESOURCES

Local response resources are located in **SECTION 7.1.1** below. Tidewater and its response contractors (listed in **FIGURE 7.1.1**) will supply this equipment and regional equipment listed on the Western Response Resource List (WRRL) to comply with WDOE Planning Standards, located in **FIGURE C.7-2.**

7.1.1 Facility Response Equipment

***Note:** Company owned equipment is only maintained at the facility for back up purposes to the OSROs identified in **APPENDIX B.1.1**. Visual inspections will be conducted on response equipment annually.

SKIMMERS/PUMPS						
WRRL ID#	TYPE/MODEL/YEAR	QUANTITY	CAPACITY	DAILY EFFECTIVE RECOVERY RATE	DATE FUEL LAST CHANGED	STORAGE LOCATION
28939	PTP, Homelite - Gas, 3" Trash pump	1		1955 bbls/day		Pasco - Warehouse
28945	PTP, Gorm Rupp - Electric, 3" Centrifugal pump (Explosion proof)	1		1955 bbls/day		Pasco - Warehouse
28946	PTP, Gorm Rupp - Gasoline, 3" Centrifugal pump	1		1955 bbls/day		Pasco - Warehouse
28931	PTP, Sandpiper -Air, 2" Diaphragm pump	1		823 bbls/day		Pasco - Warehouse
28932	PTP, Sandpiper -Air, 2" Diaphragm pump	1		823 bbls/day		Pasco - Warehouse
28933	PTP, Sandpiper -Air, 2" Diaphragm pump	1		823 bbls/day		Pasco - Warehouse
28934	PTP, Sandpiper -Air, 2" Diaphragm pump	1		823 bbls/day		Pasco - Warehouse
28935	PTP, Homelite - Gas, 3" Diaphragm pump	1		480 bbls/day		Pasco - Warehouse
28936	PTP, Homelite - Gas, 3" Trash pump	1		1955 bbls/day		Pasco - Warehouse
28937	PTP, Homelite - Gas, 3" Trash pump	1		1955 bbls/day		Pasco - Warehouse

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

7.1 RESPONSE RESOURCES

Local response resources are located in **SECTION 7.1.1** below. Tidewater and its response contractors (listed in **FIGURE 7.1.1**) will supply this equipment and regional equipment listed on the Western Response Resource List (WRRL) to comply with WDOE Planning Standards, located in **FIGURE C.7-2.**

7.1.1 Facility Response Equipment

***Note:** Company owned equipment is only maintained at the facility for back up purposes to the OSROs identified in **APPENDIX B.1.1**. Visual inspections will be conducted on response equipment annually.

SKIMMERS/PUMPS						
WRRL ID#	**TYPE/MODEL/YEAR**	**QUANTITY**	**CAPACITY**	**DAILY EFFECTIVE RECOVERY RATE**	**DATE FUEL LAST CHANGED**	**STORAGE LOCATION**
28938	PTP, Homelite - Gas, 3" Trash pump	1		1955 bbls/day		Pasco - Warehouse
28942	PTP, Homelite - Gas, 2" Trash pump	1		1269 bbls/day		Pasco - Warehouse
28943	PTP, Gorm Rupp - Electric, 2" Centrifugal pump (Explosion proof)	1		1337 bbls/day		Pasco - Warehouse
28943	PTP, Gorm Rupp - Electric, 2" Centrifugal pump (Explosion proof)	1		1337 bbls/day		Pasco - Warehouse
28944	PTP, Gorm Rupp - Electric, 3" Centrifugal pump (Explosion proof)	1		1955 bbls/day		Pasco - Warehouse
28947	PTP, Jabsco - Electric, 1-1/4" Centrifugal pump (Explosion Proof)	1		686 bbls/day		Pasco - Warehouse
28967	SK4, Trailer F, Douglas 2" Skim Pak, 2" Yanma Diesel Pump	1		480 bbls/day		Trailer F
28973	SK4, Douglas 2" Skim Pak	1		480 bbls/day		Pasco - Warehouse
30970	SK4, Lamor MniMax Skimmer, 2	1		362 bbls/day		Trailer
BOOM						
WRRL ID#	**TYPE/MODEL/YEAR**	**QUANTITY**	**SIZE**	**CONTAINMENT AREA (sq ft)**	**STORAGE LOCATION**	
28903	B2, Trailer F, Aftech	600 ft.	20"		Trailer F	

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

7.1.1 Facility Response Equipment

***Note:** Company owned equipment is only maintained at the facility for back up purposes to the OSROs identified in **APPENDIX B.1.1**. Visual inspections will be conducted on response equipment annually.

BOOM						
WRRL ID#	TYPE/MODEL/YEAR	QUANTITY	SIZE	CONTAINMENT AREA (sq ft)	STORAGE LOCATION	
28904	B2, Cont. Sys	1200 ft.	20"		Tidewater - Pasco	
30964	B2, In Water	300 ft.	20"		In Water	
30965	B2, In Water	300 ft.	20"		Northwest Terminal	
SORBENTS						
WRRL ID#	TYPE/YEAR	QUANTITY	ABSORPTION CAPACITY (gal)	STORAGE LOCATION	OPERATIONAL STATUS	
30961	ABO, Absorbent Sweeps-Bales	50 Bales		Trailer	Operational	
30962	ABO, Sorbent Pads-Bales	50 Bales		Trailer	Operational	
OTHER						
WRRL ID#	TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
28922	PS4, Trailer F, Port-a-Tank, Open Top	29 bbls.	Trailer F	Operational		
30049	TB2, Barge #1, 242'x42' - 16' depth	25083 bbls.	Tidewater Snake River Terminal	Operational		
28982	WB5, Trailer F, 15' Boom Boat, Yamaha - 30hp	1	Trailer F	Operational		
28986	WB5, 14' Boat, Yamaha - 40hp	1	Pasco - Warehouse	Operational		
28987	WB5, 14 Boat, Yamaha - 50hp	1	Pasco - Warehouse	Operational		

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

7.1.1 Facility Response Equipment

***Note:** Company owned equipment is only maintained at the facility for back up purposes to the OSROs identified in **APPENDIX B.1.1**. Visual inspections will be conducted on response equipment annually.

OTHER						
WRRL ID#	**TYPE/YEAR**	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
28991	WB4, 28' Boat - Lamplighter, 2ea Yamaha 90hp/w trailer	1	Outside Yard	Operational		
29026	VHO, Trailer F, 8'x17'- Boom/Boat/PPE/Msc spill clean supplies	1	Trailer F	Operational		
30983	VHO, Truck for transporting response trailers, 2012 GMC Sierra 2500 4x4	1	Pasco - Yard	Operational		
30984	VHO, Truck for transporting response trailers, 2001 Ford F-350 4x2	1	Pasco - Yard	Operational		
30985	VHO, Truck for transporting response trailers, 2001 Ford F-250 4x4	1	Pasco - Yard	Operational		

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

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

* USCG Classified OSRO

COMPANY/CONTRACTOR	EQUIPMENT	RESPONSE TIME
Tidewater Barge Lines	Response trailers, containment boom, recovery equipment, response vessels, interim storage	1 - 6.5
Resolve Salvage & Fire (Americas), Inc.	Emergency salvage, firefighting, lightering, and towing services	12
*National Response Corporation (NRC)		2
*Clean Rivers Cooperative	Full Response Capabilities per U.S. Coast Guard Classification	6
International Bird Rescue	Wildlife rehabilitation	9

7.1.2 Response Equipment Inspection and Maintenance

The Facility is equipped with emergency response equipment, which is listed in **SECTION 7.1.1**. This equipment should be sufficient to handle minor emergencies at the facility. For larger emergencies, contracted resources may need to be used.

The facility-owned response equipment is inspected as per the regulations using the appropriate Company response equipment inspection checklist. Equipment shall be maintained according to manufacturer specifications. Inspection records are maintained on file for a minimum of five (5) years and made available to applicable agencies upon request.

Note: Equipment that is listed in SECTION 7.1.1 as operational status ready may be temporarily unavailable due to maintenance needs or under current operation. Equipment that will be out of service for longer than three months will be noted as such on the equipment list.

The Qualified Individual has the authority to activate other Company resources or that of private contractors and other experts and consultants (per 33 CFR 154.1035(b)(iv) trained personnel for response to be on hand for the first 7 days of the response) as the situation demands.

RESPONSE EQUIPMENT INSPECTION AND MAINTENANCE
Company response resources consist of equipment and boom staged at each Company facility, Barrel-O-Boom, and spill kits carried aboard tugs and barges transporting petroleum products, and ten strategically located response trailers. Facility equipment inventories and locations are listed in **SECTION 7.1.1**. As it is Company-owned, no other plan holders rely on this equipment.
Additional response equipment is available through membership with Clean Rivers Cooperative, and under contract with International Bird Rescue. Contract agreements are contained in **APPENDIX B**. Equipment under contract with CRC is also available to other member facilities and to vessels under MFSA's Umbrella Contingency Plan. Clean Rivers Cooperative can be contacted at their 24-hour number (503) 220-2040. Clean Rivers Cooperative equipment list can be found at: www.wrrl.us.

7.1.3 Contractors, Contractor Equipment, and Labor

- The Company's primary response contractors' names and phone numbers, as well as other companies who can provide spill response services are provided in **SECTION 3**.
- The Company has ensured by contract the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to the worst case discharge or the substantial threat of such discharge.
- **APPENDIX B** contains evidence of contracts for the Company's primary response contractors.

7.1.4 Command Post

In the event of a major spill, both an off-site Emergency Operations Center (EOC) and a Unified Command Post would be established. For a minor spill, only a Command Post would be established. Refer to **FIGURE 7.1-2** for guidelines in establishing a Command Post.

FIGURE 7.1-2 - COMMAND POST CHECKLIST

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

7.1.5 Staging Area

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

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

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

In addition, the staging area should:

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

7.1.6 Communications Plan

Company-owned communications equipment and quantities commonly used to address response communications are listed below:

The Company uses the Northwest Area Contingency Plan Communications Manual, Section 9650 to coordinate incident communications. Facilities and tugs are equipped with UHF and VHF-FM radios for normal operational communications. Each tug is equipped with a single-side band radio for long distance communications and two hand held VHF-FM radios. Cellular phones and cellular phones equipped with two-way radio features are also available. A list of these devices and their locations is provided in SECTION 7.1.1. A Communications Checklist is provided in FIGURE 7.1-3.

The equipment listed in SECTION 7.1.1 is used during normal business operations but would be used during a response by the person it was assigned to if that person were assisting in the response.

Normal Company communications to each facility are conducted via telephone lines, cellular telephones, two way radios, e-mail, and fax machines.

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

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

FIGURE 7.1-3 - COMMUNICATIONS CHECKLIST

COMMUNICATIONS CHECKLIST	INITIALS	DATE/TIME STARTED	DATE/TIME COMPLETED
Develop a Communications Plan.			
Ensure adequate phone lines per staff element - contact local provider.			
Ensure adequate fax lines - contact local provider.			
Internet access necessary?			
Ensure recharging stations for cellular phones.			
VHF radio communications: • Establish frequencies • Assign call signs • Distribute radios • Establish communications schedule			
Ensure recharging stations for VHF radios.			
Determine need for VHF repeaters.			
Ensure copy machine available.			
Ensure communications resource accountability.			
Ensure responders have capability to communicate with aircraft.			

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

7.2 SITE SECURITY MEASURES

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

[redacted]

FIGURE 7.2-2 - FACILITY SECURITY

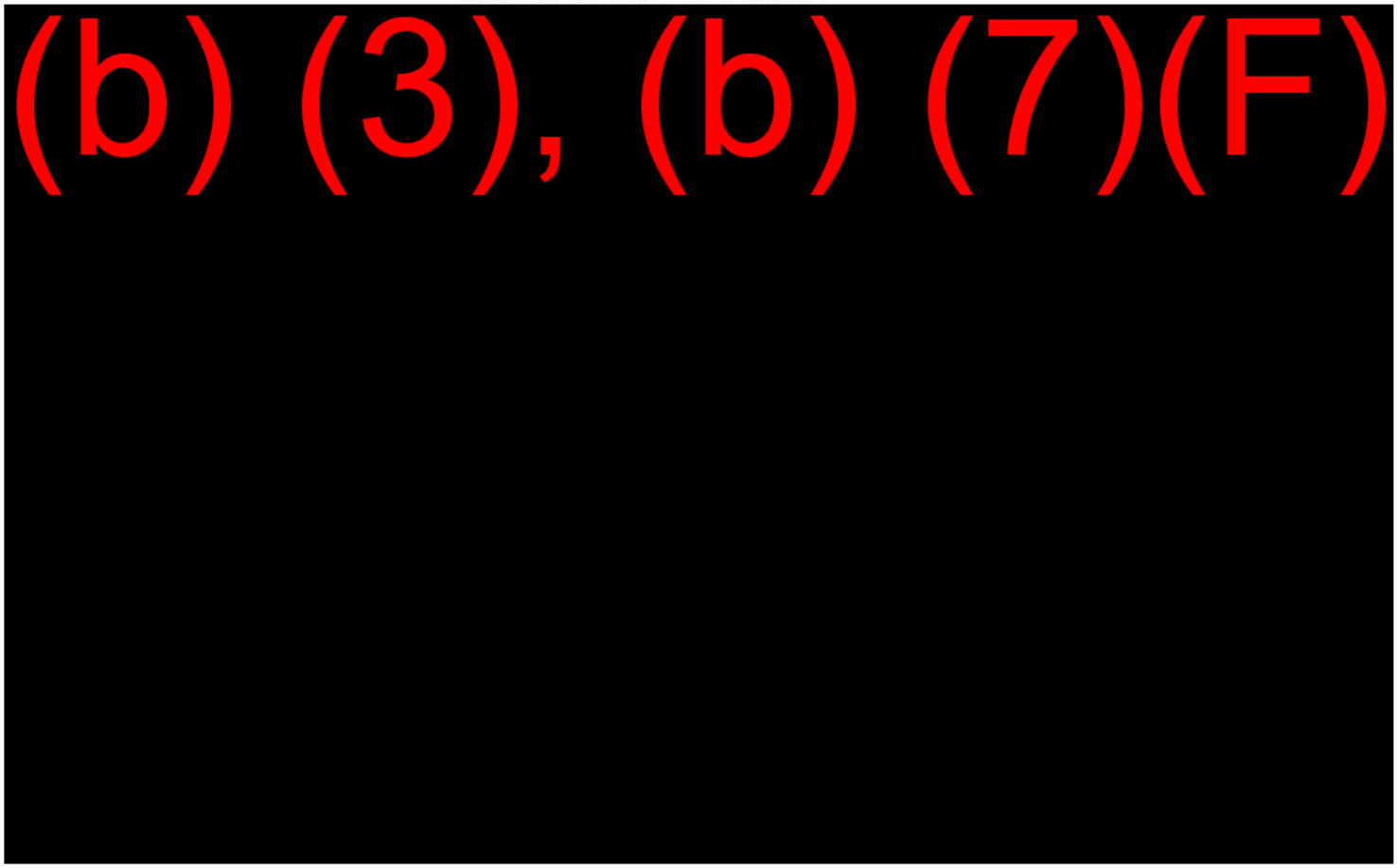


FIGURE 7.2-2 - FACILITY SECURITY, CONTINUED

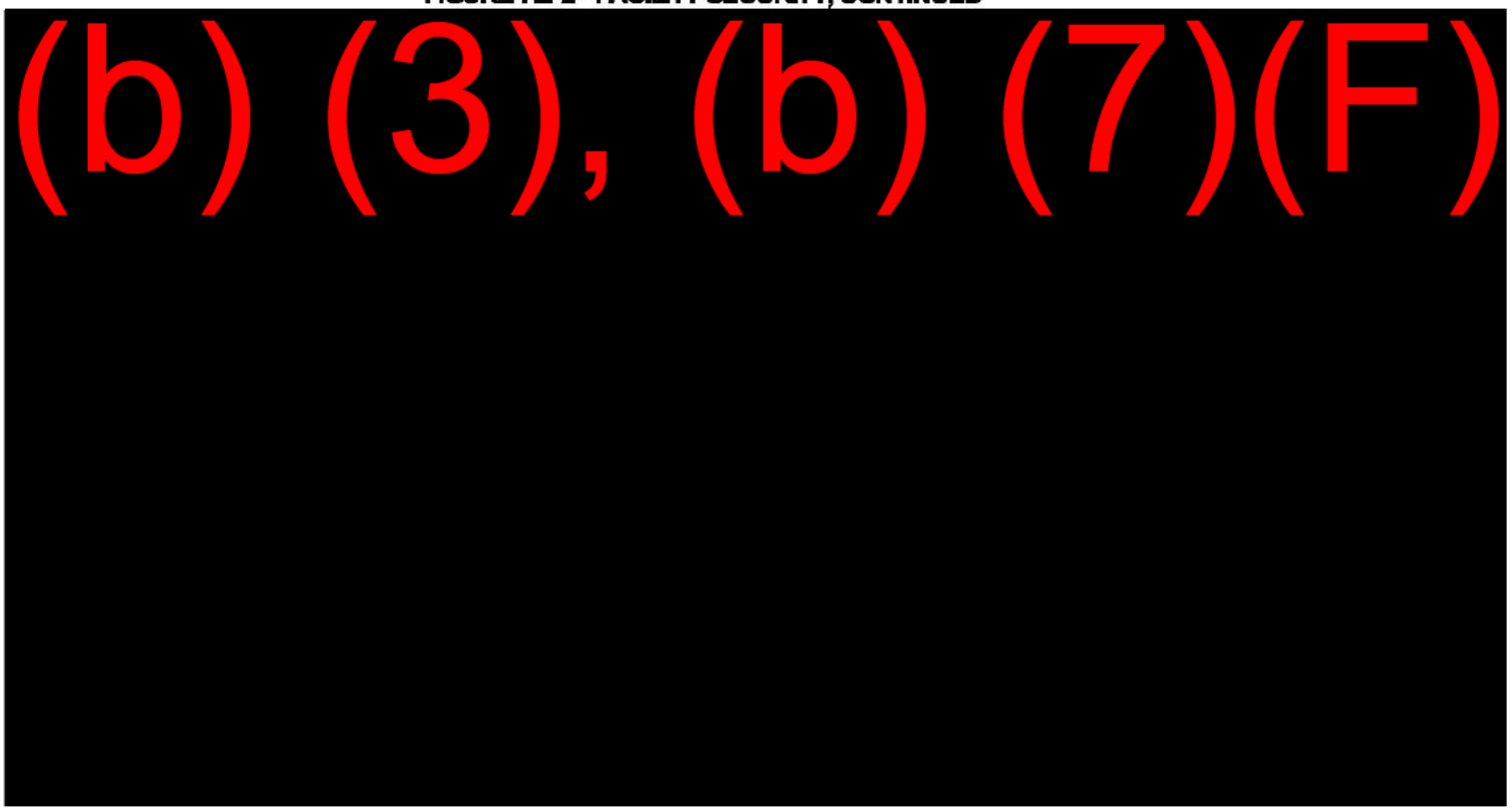
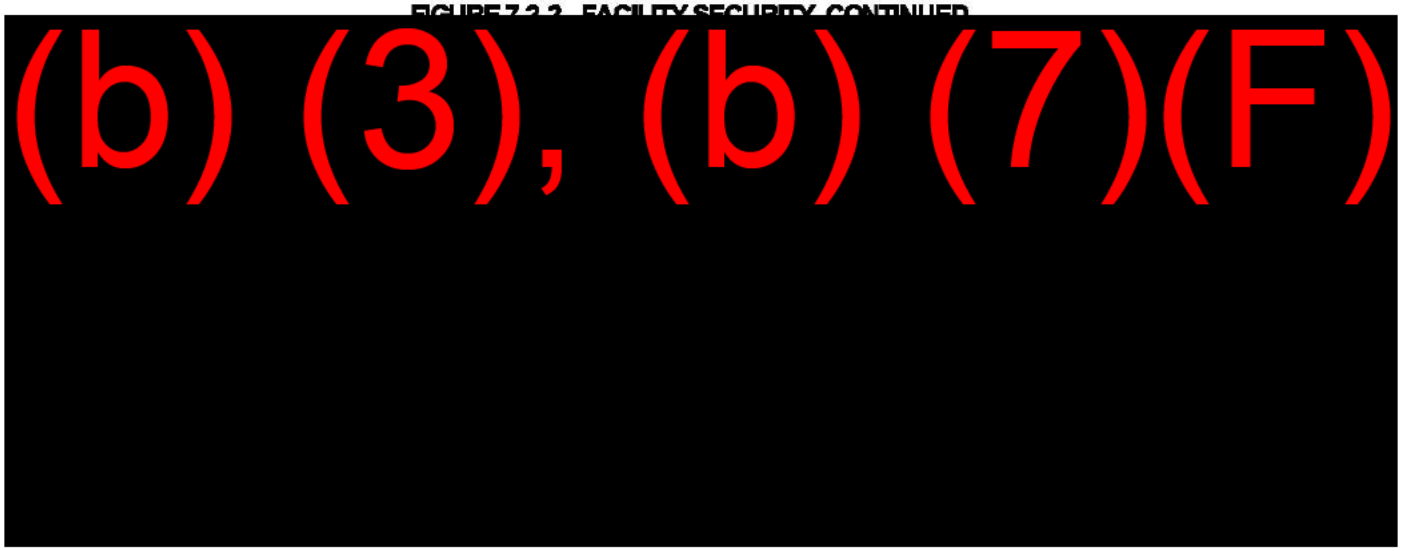


FIGURE 7.2.2 - FACILITY SECURITY CONTINUED



7.3 WASTE MANAGEMENT

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

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

During a spill response:

- Development of a Health and Safety Plan (**SECTION 5.5**) addressing the proper PPE and waste handling procedures.
- Development of a Disposal Plan (**SECTION 5.7**) in accordance with any federal, state, and/or local regulations.
- Continuous tracking of oil disposition in order to better estimate amount of waste that could be generated over the short and long-term.
- Organization of waste collection, segregation, storage, transportation, and proper disposal.
- Minimization of risk of any additional pollution.
- Regulatory review of applicable laws to ensure compliance and (if appropriate) obtain permits.
- Documentation of all waste handling and disposal activities.
- Disposal of all waste in a safe and approved manner.

Good hazardous waste management includes:

- Reusing materials when possible,
- Recycling or reclaiming waste, and
- Reducing amount of waste generated.

The management of the wastes generated in cleanup and recovery activities must be conducted with the overall objective of ensuring:

- Worker safety,
- Waste minimization,
- Cost effectiveness,
- Minimization of environmental impacts,

7.3 WASTE MANAGEMENT, CONTINUED

- Proper disposal, and
- Minimization of present and future environmental liability.

Solid wastes such as sorbents, personal protective equipment, debris, and equipment will typically be transported from the collection site to a designated facility for:

- Storage
- Waste segregation
- Packaging
- Transportation

Once this process is complete, the waste will be shipped off-site to an approved facility for required disposal.

Recovered oil and oily debris should be stored in containers as indicated in **FIGURE 7.3-3**. If necessary, with concurrence of the State On-Scene Coordinator, a bermed area can be dug to hold the waste and lined with poly-sheeting to prevent leaching. Debris should be 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 one to one and a half 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 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 to be determined on a case-by-case basis following the Disposal Plan (**SECTION 5.7**). Disposal records will be provided to the Department of Ecology upon request. A general waste containment and disposal checklist is provided in **FIGURE 7.3-2.**

Note: The facility does not receive dangerous waste shipments.

FIGURE 7.3-1 - WASTE MANAGEMENT FLOW CHART

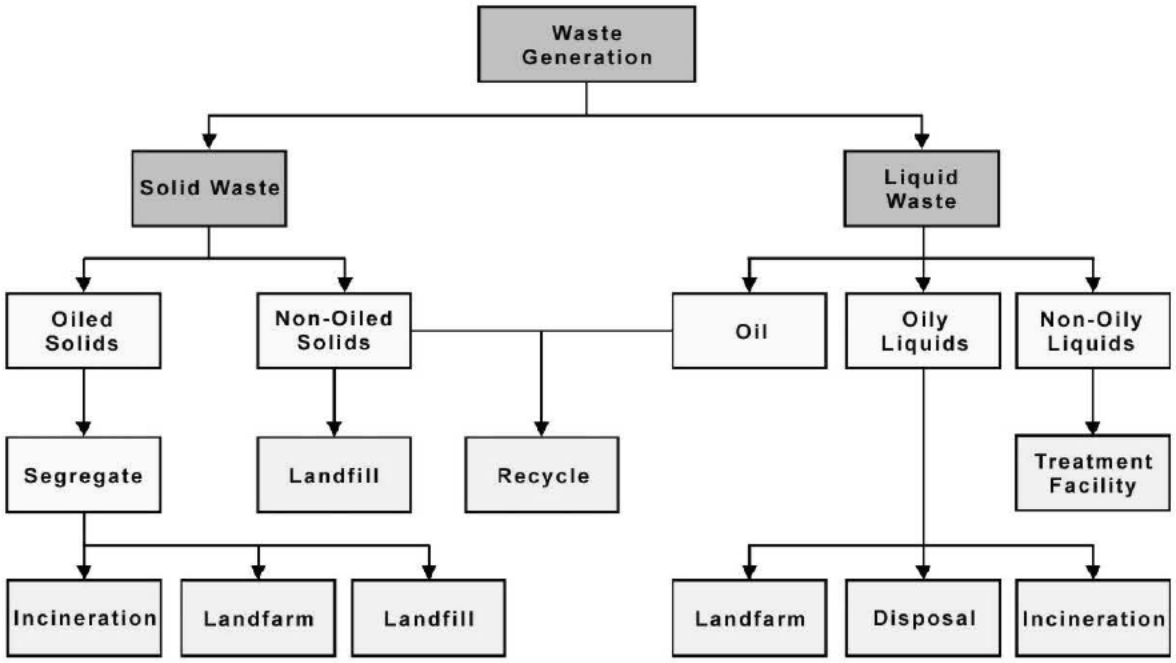


FIGURE 7.3-2 - GENERAL WASTE CONTAINMENT AND DISPOSAL CHECKLIST

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

7.3.1 Storage

During an oil spill, the volume of oil that can be recovered depends on the storage capacity available. Typical short-term (temporary) storage methods are provided in **FIGURE 7.3-3**. If storage containers such as bags or drums are used, the container should be clearly marked and/or color-coded to indicate the type of material or waste contained and/or the ultimate disposal option.

FIGURE 7.3-3 - TEMPORARY STORAGE METHODS

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

FIGURE 7.3-4 - FACILITY-SPECIFIC DISPOSAL LOCATIONS

MATERIAL	DISPOSAL FACILITY	LOCATION
Recovered Product	Oil Re-Refining Company Thermo Fluids Safety Kleen Systems PSC Environmental Services	4150 N Suttle Rd, Portland, OR 97217, (800) 367-8894 12533 SE Carpenter Dr, Clackamas, OR 97015, (503) 788-4612 814 East Ainsworth St, Pasco, WA 99301, (509) 547-8771 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568
Contaminated Soil	Finley Buttes Landfill Hillsboro Landfill Columbia Ridge Landfill Chemical Waste Management PSC Environmental Services Emerald Services Tradebe Treatment & Recycling Clean Harbors Aragonite	73221 Bombing Range Rd, Boardman, OR 97818,(541) 481-2233 3205 SE Minter Bridge Road, Hillsboro, OR 97123, (800) 963-4776 18177 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 17629 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568 7343 E. Marginal Way S, Seattle, WA 98108 , (206) 832-3000 4343 Kennedy Avenue, East Chicago, IN 46312, (800) 388-7242 11600 North Aptus Rd, Dugway, UT84022, (435) 884-8100
Contaminated Equipment	Finley Buttes Landfill Hillsboro Landfill Columbia Ridge Landfill Chemical Waste Management PSC Environmental Services Emerald Services Tradebe Treatment & Recycling Clean Harbors Aragonite	73221 Bombing Range Rd, Boardman, OR 97818,(541) 481-2233 3205 SE Minter Bridge Road, Hillsboro, OR 97123, (800) 963-4776 18177 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 17629 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568 7343 E. Marginal Way S, Seattle, WA 98108 , (206) 832-3000 4343 Kennedy Avenue, East Chicago, IN 46312, (800) 388-7242 11600 North Aptus Rd, Dugway, UT84022, (435) 884-8100
Personnel Protective Equipment	Finley Buttes Landfill Hillsboro Landfill Columbia Ridge Landfill Chemical Waste Management PSC Environmental Services Emerald Services Tradebe Treatment & Recycling Clean Harbors Aragonite	73221 Bombing Range Rd, Boardman, OR 97818,(541) 481-2233 3205 SE Minter Bridge Road, Hillsboro, OR 97123, (800) 963-4776 18177 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 17629 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568 7343 E. Marginal Way S, Seattle, WA 98108 , (206) 832-3000 4343 Kennedy Avenue, East Chicago, IN 46312, (800) 388-7242 11600 North Aptus Rd, Dugway, UT84022, (435) 884-8100

FIGURE 7.3-4 - FACILITY-SPECIFIC DISPOSAL LOCATIONS, CONTINUED

MATERIAL	DISPOSAL FACILITY	LOCATION
Decontamination Solutions	Finley Buttes Landfill Hillsboro Landfill Columbia Ridge Landfill Chemical Waste Management PSC Environmental Services Emerald Services Tradebe Treatment & Recycling Clean Harbors Aragonite	73221 Bombing Range Rd, Boardman, OR 97818,(541) 481-2233 3205 SE Minter Bridge Road, Hillsboro, OR 97123, (800) 963-4776 18177 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 17629 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568 7343 E. Marginal Way S, Seattle, WA 98108 , (206) 832-3000 4343 Kennedy Avenue, East Chicago, IN 46312, (800) 388-7242 11600 North Aptus Rd, Dugway, UT84022, (435) 884-8100
Adsorbents and Spent Chemicals	Finley Buttes Landfill Hillsboro Landfill Columbia Ridge Landfill Chemical Waste Management PSC Environmental Services Emerald Services Tradebe Treatment & Recycling Clean Harbors Aragonite	73221 Bombing Range Rd, Boardman, OR 97818,(541) 481-2233 3205 SE Minter Bridge Road, Hillsboro, OR 97123, (800) 963-4776 18177 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 17629 Cedar Springs Lane, Arlington, OR 97812, (800) 963-4776 1701 E. Alexander Ave., Tacoma, WA 98421, WA, (253) 627-7568 7343 E. Marginal Way S, Seattle, WA 98108 , (206) 832-3000 4343 Kennedy Avenue, East Chicago, IN 46312, (800) 388-7242 11600 North Aptus Rd, Dugway, UT84022, (435) 884-8100

FIGURE 7.3-5 - INTERIM STORAGE

FIGURE 7.3-5 - INTERIM STORAGE

Terminal Interim Storage

Location (Region - City)	Availability/ Status	Fixed or Mobile	Quantity	Type Barge, Tank, Drum, Truck, Etc.	Shallow/Open Water Capable	Storage Capacity
LCR - Rainier, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
LCR - Portland/ Vancouver	Available	Mobile	3	Port-a-tank	Beach	1,200 gallons each
LMCR - Hood River, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
MCR - Boardman, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
MCR - Pasco, WA	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
MCR - Little Goose Dam	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
MCR - Umatilla, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
MCR - Wilma, WA	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons
LCR - Portland/ Vancouver	Available	Mobile	2	Pillow Tank	Beach	3,000 gallons each
LCR - Portland/ Vancouver	Available	Mobile	1	Barge #4	Shallow/Open	544,236 gallons
MCR - Pasco, WA	Available	Mobile	1	Barge #1	Shallow/Open	1,053,486 gallons
LCR - Wauna	Available	Mobile	1	Barge #2	Shallow/Open	1,054,494 gallons
LSR - Wilma, WA	Available	Mobile	1	Barge #7	Shallow/Open	620,000 gallons

FIGURE 7.3-5 - INTERIM STORAGE

FIGURE 7.3-5 - INTERIM STORAGE, CONTINUED

Terminal Interim Storage, Continued

Location (Region - City)	Availability/ Status	Fixed or Mobile	Quantity	Type Barge, Tank, Drum, Truck, Etc.	Shallow/Open Water Capable	Storage Capacity
LCR – Portland/Vancouver	Expired COI	Mobile	1	Atlas	Shallow/Open	1,279,404 gallons
LCR – Portland/Vancouver	Available	Mobile	3	Glenn	Shallow/Open	2,547,888 gallons
LCR – Portland/Vancouver	Available	Mobile	1	Pioneer	Shallow/Open	2,753,436 gallons
LCR – Portland/Vancouver	Available	Mobile	1	Explorer	Shallow/Open	2,623,614 gallons
LCR – Portland/Vancouver	Available	Mobile	1	Prospector	Shallow/Open	2,618,952 gallons
LCR – Portland/Vancouver	Available	Mobile	1	Tri Cities Voyager	Shallow/Open	2,619,414 gallons
LCR – Portland/Vancouver	Available	Mobile	1	New Endeavor	Shallow/Open	1,102,248 gallons
LCR – Portland/Vancouver	Available	Mobile	1	New Frontier	Shallow/Open	1,102,248 gallons
LCR – Portland/Vancouver	Available	Mobile	1	New Vision	Shallow/Open	1,102,248 gallons

LCR-Lower Columbia River, MCR – Middle Columbia River, LSR – Lower Snake River, COI – USCG Certificate of Inspection

7.4 PUBLIC AFFAIRS

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

- Guidelines for dealing with the media
- Media Statement (**FIGURE 7.4-1**)

7.4 PUBLIC AFFAIRS, CONTINUED

GUIDELINES FOR DEALING WITH THE MEDIA

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

Provide	• A brief, general description of what happened and • 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, • Number of injured or killed, if known, or • 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, such as whether these were deaths, injuries, any threat to the public, or danger of explosion or fire. • 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.

7.4 PUBLIC AFFAIRS, CONTINUED

Other considerations, continued:	• 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 and/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 7.4-1 - MEDIA STATEMENT

To be written prior to giving statement to media. DO NOT DISTRIBUTE WRITTEN MATERIAL.
(Circle the response where appropriate.)

1. Spokesperson's Full Name: _____

   Title: _____

   I have made an initial assessment of the incident and have information for you. I must keep this session brief and return to help control our response activities. The Company and local emergency response agencies (name them) are working to rectify the problem. Our primary concern is to protect the public, our employees and the environment.

2. Problem or Nature of Problem: _____

   _____

   _____

   _____

3. When This Happened/ Or Was Reported: _____ a.m./p.m.

4. Injuries: *[There are no injuries]*

   [Unfortunately, there are confirmed injuries. The Police and (Hospital) should be able to give you further information.]

5. Danger: *[There is no danger at the present time.]*

   [There is some danger present. Specifically,

   _____*]*

6. Is the Public being Affected Now? *[At the present time, the public is not being affected.]*

   [The public is being affected at this time. As I stated before, our primary concern is to protect the public and the environment.]

7. When Might the Danger or Inconvenience be Over? *The (danger/inconvenience) will most likely be over in _____ hours.*

8. Further Info: *The media can go to _____ (place) at _____ (time) for more information.*

9. End the Interview: *That is all we have for you at this time. I must return to the site. A Company spokesperson, _____, is enroute. Thanks for your cooperation.*

10. Walk Away.

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS
Tiers of Oil Spill Claim Events
• Tier 6 Claims Event - No oil spill claims are expected or anticipated • Tier 5 Claims Event - Chance of an oil spill claim or several small claims may be submitted • Tier 4 Claims Event - Up to 10 oil spill claims are expected or anticipated • Tier 3 Claims Event - 10 to 100 oil spill claims are expected or anticipated • Tier 2 Claims Event - 100 to 500 oil spill claims are expected or anticipated • Tier 1 Claims Event - More than 500 oil spill claims are expected or anticipated
Oil Spill Claims Management
Management of all claims will be provided by the Tidewater's Chief Financial Officer (CFO). Outside contractors may be hired to support claims processing, but management and oversight of the process will continue to be provided by the CFO.
Tidewater's Chief Financial Officer: Myron Reising Telephone: (360) 693-1491 Fax: (360) 694-8981 Email: myron.reising@tidewater.com
Insurance
Tidewater is insured against claims through a Protection and Indemnity (P&I) insurance policy with oil pollution liability limits of $1,000,000,000. The P&I policy is insured through West of England. Tidewater is self-insured against claims up to $50,000 per event. Tidewater's insurance, including insurance for oil spill related claims, is managed by the Tidewater's Corporate Risk Manager and West of England.
Tidewater's Corporate Risk Manager: David Konz Telephone: (360) 693-1491 Fax: (360) 694-8981 Email: david.konz@tidewater.com
West of England Contact: Jonathan Kefford Telephone: +44 20 7716 6103 Website: www.westpandi.com
Claims Handling Process
After an oil spill occurs, Tidewater will advertise for claims following the information provided in the Section 7.5. Claimants should use the Tidewater Claim Form (Form CL-1) to submit their claim, but other claim forms that provide an equivalent amount of information will be accepted. Completed claim forms must be legible, signed in ink by the claimant, provide a sum certain monetary amount claimed, and be accompanied by supporting documentation. Tidewater is committed to working with claimants in good faith to help them understand the type and amount of documentation that might be required to support their claim, but ultimately the responsibility to prove their claim remains with claimant. Examples of documentation needed for various types of claims can be found in Figure 7.5-1. Section 7.5 explains the Tidewater's claims adjudication process and provides related timeframes.

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED

Claims Handling Process, Continued

Depending on the number of expected or anticipated number of claims related to the spill, Tidewater may or may not establish local claim centers (see Section 7.5). Claims related to the reimbursement of Uncompensated Oil Spill Removal Costs will be accepted by Tidewater up to six (6) years from the date cleanup was completed. All other types of claims will be accepted up to 3 years from the date that Tidewater began advertising for claims or three (3) years from the date that the injury or damage being claimed was reasonably discovered – whichever date is earlier. Natural Resource Damage (NRD) claims are handled separately from other claims, and may be accepted by Tidewater in a manner and timeframe agreed to by the company and the lead federal and/or state trustee agency.

Claim Advertisements

Tidewater will advertise for claims after being advised to do so by our legal department, or within 15 days after being designated as the Responsible Party for an oil spill by either the USCG or EPA Federal On-Scene Coordinator (FOSC) or the USCG National Pollution Funds Center (NPFC). More than any other factor, the geographic extent of the oil spill will dictate the publications that claim advertisements will run. At minimum, Tidewater is committed to advertising for oil spill claims in the Columbian (Vancouver, WA) and the Oregonian (Portland, OR). Additional publications will be considered on a spill-specific basis. The length of time paid advertisements will run in local publications will be based on recommendations provided by our legal counsel or the length of time specified by FOSC or the NPFC. The following is an example of how paid advertisements for oil spill claims could appear in local publications:

ADVERTISMENT FOR OIL SPILL CLAIMS

Tidewater Barge Lines, Inc.
Oil Spill - xx/xx/xxxx
xxxx Gallons Petroleum
Columbia River (Vancouver, WA)

The U.S. Coast Guard National Pollution Funds Center has designated Tidewater Barge lines, Inc. as the Responsible Party for an oil spill that occurred around 7:00 AM (PST) on xx/xx/xxxx, impacting waters of the Columbia River and Southwest Washington. An estimated xxx gallons of petroleum was released from our facility on Lower River Road (in Vancouver) into the Columbia River.

Tidewater Barge Lines, Inc. is receiving claims related to this incident. Information about claims and the claims process is available on-line at Tidewater's website (see links below). You can also call, email, or mail us if you need additional assistance or information.

Website: www.tidewater.com\claims
Email: claims@tidewater.com
Phone: (360) 759-0307 (Mon - Fri, 8 am to 5 pm (PST)
Mail: Tidewater - Oil Spill Claims
PO Box 1210, Vancouver, WA 98666

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED
Claims Contact Information
A dedicated email account has been established by Tidewater for claims; claims@tidewater.com. After a spill occurs, claims inquiries will be handled by the CFO or members of the Finance Department, as assigned. If the number of claims expected or anticipated warrants the establishment of a separate telephone number to handle claim inquiries, Tidewater will contract with TBS Adjusting to provide that service. TBS Adjusting indicates that a toll-free line has already been established for Tidewater. It will be available within 24 hours from date and time of a service request regardless of the request falling on a weekend or holiday. Until such a service is established, if established, the general number for our Finance Department will be used to handle claim inquires; (360) 759-0307. In addition, questions about claims will be available in these methods:
Website: www.tidewater.com\claims Email: claims@tidewater.com Phone: (360) 759-0307 (Mon-Fri, 8am to 5pm PST) Mail: Tidewater – Oil Spill Claims, PO Box 1210, Vancouver, WA 98666
Local Claim Centers
The establishment of a local claim center, or multiple centers, will only be considered if there is a significant community need or the number of expected or anticipated claims warrants it. Tidewater is committed to establishing a single claim center within the community most greatly impacted by the spill during a Tier 2 Claim Event for a period of no less than 30 days but not to exceed 60 days. Tidewater is committed to establishing one or more claim centers during a Tier 1 Claim Event in communities impacted by the spill for an undefined period of time greater than 60 days, as warranted by workload and community need. Tier 3 though Tier 6 Claim Events will be managed by the Tidewater Finance Department, located at our main office in Vancouver, WA, without the establishment of local claim centers.
Claim Forms (Internal & External)
Tidewater Claim Form (Form CL1) should be used in the submission of oil spill claims to the company; Form CL1 is available online at www.tidewater.com/claims. Other forms may be used if they provide an equivalent level of information as that found on the form. Information entered in the claim form must be typed or legibly hand written in blue or blue-black ink.
The claim form must include the sum-certain monetary amount being claimed and be signed by the claimant in black or blue-black ink. Internal to Tidewater in the claims adjudication process, Form CL-2 is used to track the status of claims received, and Form CL-3 is a claim check sheet that records the type of documentation provided with each claim.
Copies of the forms used by Tidewater are provided at the end of this section: • Form CL-1 Claim Form (external use – claimant's use) • Form CL-2: Claim tracking Sheet (internal use only) • Form CL-3: Claim Check Sheet (internal use only)

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED
Submitting Claims to Tidewater
Claims (with supporting documentation) may be submitted to Tidewater electronically at claims@tidewater.com or by U.S. Mail at the address listed below. The claim form must be signed in ink by the claimant, and provide a sum certain monetary amount being claimed. Claims related to the reimbursement of Uncompensated Oil Spill Removal Costs will be accepted by Tidewater up to six years from the date cleanup was completed. All other types of claims will be accepted up to three years from the date that Tidewater began advertising for claims or 3 years from the date that the injury or damage being claimed was reasonably discovered – whichever date is earlier. NRD claims are handled separately from other claims, and may be accepted by Tidewater in a manner and timeframe agreed to by the company and the lead federal and/or state trustee agency.
Postal Mailing Address for Oil Spill Claims: Tidewater – Oil Spill Claims PO Box 1210 Vancouver, WA 98666
Questions regarding claims, or the status of claims already submitted, will be handled through the Tidewater's Financial Department. Claimants or potential claimants should call (360) 759-0307 (Mon-Fri, 8am to 5pm PST) or email Tidewater at claims@companyx.com. Additional information regarding claims can be found on our website at www.tidewater.com\claims.
Claims Adjudication and Timeframes
Tidewater will process claims in the order they are received. Each claim will be assigned a unique claims file number which will be used to track the claim internally. The claims file number can also be used by claimants who wish to provide additional information to support their claim, or those inquiring about the status of a claim. Tidewater will review each claim received to ensure, as much as possible, that all needed information to make a claim decision has been provided by the claimant. If additional information is needed, we will request that the claimant forward that information to us so it can be added to the claim and considered during adjudication. If the information requested is not received within 90 days, Tidewater will adjudicate the claim with the information it has available. This may result in a reduction of possible claim compensation or an outright denial of the claim. Once Tidewater sends the claimant a claim determination, the claimant must either accept or reject the offer within 60 days. If they accept the offer, the claimant must sign a release before Tidewater will process the offer for payment. If the claimant takes no action within 60 days after receiving the claim determination, Tidewater's offer to pay the claim will be voided, and the claim will be closed. If the claimant rejects the offer, they can provide additional information and ask Tidewater to reconsider the claim determination; typically, this would start an entirely new review process with another claim determination made as a result of the reconsideration - reconsideration is not negotiation. Claims submitted to Tidewater will be paid in the order that accepted offers (with signed releases) are received. Claims are usually paid with 30 days from the date Tidewater receives the claimant's signed release.

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED

Claims Documentation

The amount and type of proof and documentation needed by Tidewater to make a decision on a claim depends on many factors, including the claim type and the monetary amount claimed. Resource Damage (NRD) claims will be handled separately from other claims, and may only be submitted to Tidewater by a federal or state trustee agency. Tidewater is committed to working with trustee agencies directly in the NRD process.

The following types of claims may be submitted to Tidewater after an oil spill occurs, where Tidewater accepts or is designated as the Responsible Party for the oil spill. Example types of documentation are also included below within the listing of each claim type. The examples provided are for reference only; they may or may not represent everything needed by Tidewater to adjudicate a claim.

Removal Costs: Costs to prevent, minimize, mitigate, or clean up the oil spill.

Examples of Proof and Documentation that may be needed:

- Proof that actions were coordinated with the Coast Guard or EPA's Federal On-Scene
- Coordinator (FOSC) for the incident or approved by Tidewater in advance.
- Witness statements
- Detailed description of actions
- Dates on which work was performed
- Analysis of spill substance
- Map of area
- Pictures of area, damage, and spill
- Receipts, invoices, or similar records with description of work
- How rates were determined and any comparison of rates
- Daily records of personnel costs including details on labor rates, hours, travel, and transportation
- Daily records of equipment costs including description and use
- Signed disposal manifests and proof of payment for disposal
- Payroll verification of hourly rate at the time of spill
- Verification of equipment rates for equipment used

Property Damage: Injury to or economic loss resulting from destruction of real property (land or buildings) or other personal property. Injury to or economic loss resulting from damage to a boat.

Examples of Proof and Documentation that may be needed:

- Proof of ownership or leasehold interest in the property; lease or rental agreement of any
- substitute property used
- Proof or evidence that property was injured, destroyed, or not usable because of the oil spill
- Report of any expenses or money lost while the property was unavailable because of spill damage
- Proof of value of property both before and after the spill or injury
- Documented cost of repair or replacement of the property
- Proof of value of property before and after the spill
- Documentation that shows whether or not substitute property was available, and related costs of substitute property if used.
- Documentation that shows how claimant lost money from the damage to the property
- Witness statements
- Copy of title, deed, lease, or license to property in claimant's name
- Pictures or videotape of property and/or damage
- Maps or legal documents showing the location of the property within the spill area
- Professional property appraisals for the value of the property prior to and after the spill, actual selling price of the property, and evidence connecting the depressed selling price to the oil spill rather than to other economic or real property factors
- Copies of bills paid for repair of damage or two estimates showing activities and costs to repair the damage

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED
Claims Documentation, Continued
Loss of Profits or Earning Capacity: Damages equal to the loss of profits or impairment of earning capacity due to the injury, destruction, or loss of property or natural resources
Examples of Proof and Documentation that may be needed:
• Proof that property or natural resources that were damaged, destroyed or lost, resulted in • claimant's loss • Proof the claimant's income was reduced due to the damage or loss of the property or • natural resources and how much it was reduced • Documentation showing the amount of profits and earnings in similar time periods • Documentation showing any alternative employment or business during the period claimed • and any income received during that period • Documentation showing and savings to overhead costs or other normal expenses - those • not paid as a result of the spill (commuting costs, utility fees, employee salaries) • Photos of damaged property (before and after the spill) • Witness Statements on how the spill led to loss of business income or earning capacity; explain any earnings anomalies • Statement on how the spill caused a loss in income • Affidavit from claimant's employer about the impact the spill had on an employees work or income, and if the employer intends to file a claim for lost profits or earning capacity.
• Copies of pay stubs, receipts, timesheets from before, during, and after the spill Personnel records from claimant's employer before, during, and after the spill, showing employment • Claimant's description of efforts to reduce loss, including job search • Copies of any job-hunting expenses (e.g., travel costs) • Signed copies of income tax returns and schedules for at least two years prior to spill • Details of employment expenses not paid during period being claimed (e.g., commuting costs) • Copies of pay stubs, receipts, timesheets from alternative employment during time of spill (including unemployment compensation) • Description and documentation of business losses due to spill • Copies of letters of business cancellations caused by the spill damage • Maps or descriptions of the area showing the business location and the spill impact area • Financial statements for at least two years prior to spill and from the year of the spill • Signed copies of business income tax returns and schedules for at least three years prior to spill • Details on efforts to mitigate business losses or why no efforts were taken • For hotels, daily and monthly occupancy information for two years prior to spill and the year of the spill • Description of marine charter business losses caused by the spill • Evidence that charter vessel(s) was in the area impacted by the spill and were unable to carry on their business due to the spill • Maps or descriptions of the area showing charter business location within spill area • Signed copies of income tax returns (for charter boat business) and schedules for at least three years prior to spill • Details on expenses not paid out during period being claimed (e.g., wages) • Booking records for three years prior to spill and year of spill • List of charter rates, including any services the business specializes in (e.g., sport fishing) • Copies of any logs relating to boating activities for the year prior to and the year of the spill • Registration documents for the vessel

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED
Claims Documentation, Continued
Loss of Subsistence Use of Natural Resources: Loss of subsistence use claim if natural resources claimants depend on for subsistence use purposes that have been injured, destroyed, or lost by an oil spill Event.
Examples of Proof and Documentation that may be needed:
• Proof that injury, destruction, or loss of natural resources would have been used by the claimant to obtain food, shelter, clothing, medicine, or other minimum necessities of life. • Documentation identifying each specific natural resource for which compensation for loss of subsistence use is being claimed • Description of the actual subsistence use you make of each specific natural resource you identify; • Description of how and to what extent claimant's subsistence use of the natural resource was affected by the injury to, destruction of, or loss of, each specific natural resource; • Description of claimant's efforts to mitigate subsistence use loss • Description of alternative source(s) or means of subsistence available to claimant during the period
Loss of Government Revenue: Net loss by Federal, State, or Local Governments of taxes, royalties, rents, fees, or net profit shares due to the injury, destruction, or loss of real property, personal property, or natural resources.
Examples of Proof and Documentation that may be needed:
• Information showing that the loss of revenue was caused by the injury to, destruction of, or loss of real or personal property or natural resources caused by the discharge • Information showing the amount, identity, and description of the revenue loss for which compensation is claimed, including the applicable authority for collecting the revenue, method of assessment, applicable rate, and dates of collection or periods of loss • Documentation showing expenditures saved because revenue was not collected • The total assessment or revenue collected and related expenditures for comparable revenue periods, typically covering two years • Description of what revenues were impacted and how the spill caused a loss of revenues • Copies of statutes, regulations, ordinances, etc., outlining applicable authority to raise such revenues, property affected, method of assessment, rate of assessment, and method and dates of collection of assessment • Government financial reports showing total assessment or revenue collected for comparable periods, typically covering two years • Details of any expenses not paid out by government

7.5 LIABILITY CLAIMS

LIABILITY CLAIMS, CONTINUED
Claims Documentation, Continued
Increased Public Service Costs: Net costs by State & Local Governments for providing increased or additional public services during or after removal activities, including protection from fire, safety, or health hazards, caused by a discharge of oil or directly attributable to response to the oil spill Event.
Examples of Proof and Documentation that may be needed:
• Documentation showing justification for the public services provided, including documentation of what specific services were provided and the relationship to the spill. • Documentation showing when services were provided during and after the oil spill removal. • Documentation showing services were in addition to services normally provided • Documentation showing the net cost for the services and the methods used to compute those costs • Reports showing the increased public services were required and if the services were due to • fire, health, or safety hazards • Detailed description of what increased services were necessary and why, including a distinction between removal activities, safety acts, and law enforcement acts, and if the increase was actually incurred or if normal resources were diverted for use • Daily reports on the activities of the government personnel and equipment involved Government Labor and Equipment Rates • Payroll verification of the government hourly rate at the time • Verification of the standard government equipment rates for any equipment claimed • Signed and dated records of the spill including hourly rates for labor and equipment • Explanation as to whether rates are fully loaded or not and formulas used • Certification that rates used reflected actual costs incurred and did not include punitive damages or fees

FIGURE 7.5-1 - LIABILITY CLAIMS FORMS

Click to view/print Form CL-1 Claim Form (external use claimant's use)

Form# CL-1

Tidewater Barge Lines
Oil Spill Claim Form

1. **Claimant Information:**

   Name:
   POC:
   Address:
   Telephone:
   Fax:
   E-mail:

2. **Provide Incident Details, if available:**

   Date & Time Injury or Damage Discovered:
   Location of Injury or Damage:
   Position (Lat/Long) of Injury or Damage:

3. **Describe the injury or damage you are claiming:**

4. **Did you have any prior contact with Tidewater regarding your claim? With who? Please describe.**

5. **What is the type of claim you are submitting and what is the total monetary amount you are claiming in U.S. dollars?** *(Must be sum certain)*

   Claim Type: _____

   Total Amount Claimed: $_____

Form# CL-1

6. **Have you or your legal representative submitted the claim to an insurer or another responsible party before submitting this claim to Tidewater?**
   (Yes/No) – if "yes" provide date claim submitted to insurer or other RP and provide contact information

7. **If the claim was submitted to an insurer of another responsible party, what response (written or verbal) or payment did you receive?**
   (i.e. Insurer or RP took no action, denied the claim, stated they had no money to pay the claim, made only a partial payment of $$$, or other – explain)

8. **Have you commenced an action in court to recover costs which are the subject of this claim?**
   (Yes/No) – if "yes" provide contact information for your attorney (name, address, telephone number), the court in which action is pending, and the civil action number

9. **Describe the nature and extent of injuries or damages claimed, as supported by the documentation you are submitting with this claim:**

10. **Description of how the injury or damage was caused:**

Form# CL-1

11. What actions did you take, if any, to minimize the injury or damages you claim:

12. Witnesses:

(Provide the name, address, telephone number, & email address) of anyone who witnessed the injury or damage you claim. Also provide a summary of each witness's knowledge of the injury or damage claimed, and/or the incident which caused the injury or damage.

Name:
Address:
Telephone Number:
Fax:
Email:
Summary:

Name:
Address:
Telephone Number:
Fax:
Email:
Summary:

Name:
Address:
Telephone Number:
Fax:
Email:
Summary:

13. List of Documents & Attachments:

Form# CL-1

14. Claimant's Signature & Date:

I, the undersigned, agree that upon acceptance of any compensation from Tidewater, I will cooperate fully in any claim or action by Tidewater to recover costs paid out in claims from any 3rd Party or entity that may also be responsible for the oil spill. This cooperation shall include, but is not limited to, immediately reimbursing to the Fund any compensation received from any other source for the same costs and/or damages and, providing any documentation, evidence, testimony, and other support, as may be necessary for the Fund to recover such compensation.

I, the undersigned, certify that, to the best of my knowledge and belief, the information contained in this claim represents all material facts and is true. I understand that misrepresentation of facts may result in legal action against me.

_____ _____

Signature Date

_____

Print Name

15. Legal Representative's Signature & Date:

Is this claim being presented to Tidewater by your legal representative? If so, the legal representative must also sign this claim and provide contact information.

_____ _____

Signature Date

Legal Representative's Name:
Address:
Telephone Number:
Fax:
Email:

FIGURE 7.5-1 - LIABILITY CLAIMS FORMS, CONTINUED

Click to view/print Form CL-2: Claim tracking Sheet (internal use only)

Form CL-2

Tidewater
Claim Tracking Sheet

Claim Number _____

Claimant's Name _____

Claimant's Address _____

Claimant's Contact Phone# _____

Claimant's Email _____

Claim Type _____

Amount Claimed *(US Dollars)* _____

Date Claim Received _____

Assigned Claims Adjuster _____

Adjuster Phone Number _____

Adjuster Email _____

Date Follow-Up Information Requested *(if applicable)* _____

Date Claim Determination Sent _____

Claim Determination Amount *(US Dollars)* _____

Date Claim Release Received *(if applicable)* _____

Date Claim Payment Approved *(if applicable)* _____

Date Claim Payment Mailed *(if applicable)* _____

Date Claim Closed _____

FIGURE 7.5-1 - LIABILITY CLAIMS FORMS, CONTINUED

Click to view/print Form CL-3: Claim Check Sheet (internal use only)

Form CL-3

Tidewater
Claim Check List

Claim Number _____

Claimant's Name _____

Date Claim Received _____

Documents Provided		
1	Claim Form - Signed (Tidewater or Equivalent)	
2	Affidavit from employer on the impact on work or income due to the spill and if the company will be filing a claim for lost profits	
3	Analysis of spill substance	
4	Any expenses or money lost while the property was unavailable because of spill damage	
5	Beach closures or fishing advisories	
6	Booking records for three years prior to spill and year of spill	
7	Certification that rates used reflected actual costs incurred and did not include punitive damages or fees	
8	Copies of any job-hunting expenses (e.g., travel costs)	
9	Copies of any logs relating to boating activities for the year prior to and the year of the spill	
10	Copies of bills paid for repair of damage or two estimates showing activities and costs to repair the damage	
11	Copies of letters of business cancellations caused by the spill damage	
12	Copies of pay stubs and other documentation showing income Claimant received before, during, and after the spill and oil spill response	
13	Copies of pay stubs, etc., from alternative employment during time of spill	
14	Copies of pay stubs, receipts, etc., from before, during, and after the spill	
15	Copies of statutes, regulations, ordinances, etc., outlining applicable authority to raise such revenues, property affected, method of assessment, rate of assessment, and method and dates of collection of assessment	
16	Copy of title, deed, lease, or license to property in Claimant's name	
17	Daily records of equipment costs including description and use	
18	Daily records of personnel costs including details on labor rates, hours, travel, and transportation	
19	Daily reports on the activities of the government personnel and equipment involved	
20	Dates on which work was performed	

Form CL-3

21	Describe any compensation available to Claimant for the subsistence loss Claimant suffered	
22	Describe each alternative source or means of subsistence available to Claimant during the period of time for which Claimant claim a loss of subsistence	
23	Describe each effort Claimant made to mitigate Claimant's subsistence use loss	
24	Describe how and to what extent Claimant's subsistence use of the natural resource was affected by the injury to, destruction of, or loss of, each specific natural resource	
25	Describe the actual subsistence use Claimant make of each specific natural resource Claimant identify	
26	Description and documentation of business losses due to spill	
27	Description of business losses caused by the spill	
28	Description of efforts to reduce Claimant's loss, including job search	
29	Description of what revenues were impacted and how the spill caused a loss of revenues	
30	Detailed description of actions	
31	Detailed description of what increased services were necessary and why, including a distinction between removal activities, safety acts, and law enforcement acts, and if the increase was actually incurred or if normal resources were diverted for use	
32	Details and explanation of net loss of revenue	
33	Details of any expenses not paid out by government during the period being claimed	
34	Details of employment expenses not paid during period being claimed (e.g., commuting costs)	
35	Details on efforts to mitigate losses or why no efforts were taken	
36	Details on expenses not paid out during period being claimed (e.g., wages)	
37	Evidence connecting the depressed selling price of a property to the oil spill rather than to other economic or real property factors	
38	Evidence that vessel(s) were in the area impacted by the spill and were unable to carry on their business due to the spill	
39	Explanation as to whether rates are fully loaded or not and formulas used; states should provide rates under OMB Circular A-87	
40	Financial statements for at least two years prior to spill and from the year of the spill	
41	For hotels, daily and monthly occupancy information for two years prior to spill and the year of the spill	
42	FOSC report	
43	FOSC, natural resource trustee and newspaper reports describing the oil spill and response, and the resulting injury, destruction or loss of natural resources	
44	Government financial reports showing total assessment or revenue collected for comparable periods, typically covering two years	

Form CL-3

45	Government Labor and Equipment Rates	
46	How rates were determined and any comparison of rates	
47	Identify each specific natural resource for which compensation for loss of subsistence use is being claimed	
48	Information in EPA or USCG notifications, and claims advertising	
49	Information on EPA or USCG notification	
50	Lease or rental agreement of any substitute property used	
51	List of charter rates, including any services the business specializes in (e.g., sport fishing)	
52	Map of area	
53	Maps or descriptions of the area showing business location within spill area	
54	Maps or descriptions of the area showing the business location and the spill impact area	
55	Maps or legal documents showing the location of the property within the spill area	
56	Maps	
57	Newspaper reports describing the spill	
58	Payroll verification of hourly rate at the time of spill	
59	Payroll verification of the government hourly rate at the time	
60	Personnel records from Claimant's employer before, during, and after the spill, showing employment	
61	Photographs and videos	
62	Photos of damaged property (before and after the spill)	
63	Pictures of area, damage, and spill	
64	Pictures or videotape of property and/or damage	
65	Professional property appraisals for the value of the property prior to and after the spill	
66	Published accounts, witness statements and other written records documenting Claimant's use of natural resources for subsistence purposes before, during, and after the spill and oil spill response	
67	Receipts, invoices, or similar records with description of work	
68	Records showing compensation Claimant received for Claimant's loss	
69	Records showing the expenses Claimant avoided during the time Claimant were not able to carry out Claimant's subsistence use of the affected natural resource	
70	Registration documents for the vessel(s), copies of business license, vessel license, fishing license, captain's license	
71	Reports showing the increased public services were required and if the services were due to fire, health, or safety hazards	
72	Signed and dated records of the spill including hourly rates for labor and equipment	

Form CL-3

73	Signed copies of income tax returns and schedules for at least three years prior to spill	
74	Signed copies of income tax returns and schedules for at least two years prior to spill	
75	Signed disposal manifests and proof of payment for disposal	
76	Statement from Claimant or witnesses on how the spill caused the loss of income; explain any earnings anomalies	
77	Statement from Claimant or witnesses on how the spill led to loss of income or earning capacity; explain any earnings anomalies	
78	Statement on how the spill caused a loss in income	
79	Store and barter receipts showing the replacement costs Claimant claim;	
80	Verification of standard equipment rates for equipment used	
81	Verification of the standard government equipment rates for any equipment claimed	
82	Witness statements and documents showing the alternative sources of subsistence available to Claimant, and Claimant's efforts to reduce the damages resulting from Claimant's loss of subsistence use, including receipts from job-hunting expenses (e.g., travel costs)	
83	Witness(es) statement(s)	
84	Other	
85	Other	
86	Other	

SECTION 8

Last revised: 03/01/2008

DEMOBILIZATION / POST-INCIDENT REVIEW

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8.1 Terminating the Response

8.2 Demobilization

Figure 8.2-1 - Demobilization Checklist

8.3 Post-Incident Review

Figure 8.3-1 - Standard Incident Debriefing Form

8.3.1 Final Spill Cleanup Report

8.1 TERMINATING THE RESPONSE

- A team of federal, state, and Company personnel must certify that each area is clean before halting cleanup operations.
- Demobilize equipment and personnel at the first opportunity in order to reduce cost.
- Consider which resources should be demobilized first; for example, berthing expenses can be saved by demobilizing out-of-area contractors before local ones.
- Equipment may need both maintenance and decontamination before being demobilized.
- All facilities (staging area, Command Post, etc.) should be returned to their pre-spill condition before terminating operations.
- Determine what documentation should be maintained, where, and for how long.
- Contract personnel may be more susceptible to "suffering" injuries as they approach termination.
- Some activities will continue after the cleanup ends; examples include incident debriefing, bioremediation, NRDA studies, claims, and legal actions.
- Consider expressing gratitude to the community, police department, fire department, and emergency crews for their work during the response.

8.2 DEMOBILIZATION

The Company can reduce costs considerably by developing a Demobilization Plan (**SECTION 5.10**). Therefore, emphasis must be placed on establishing efficient demobilization procedures. A Demobilization Checklist is provided in **FIGURE 8.2-1**.

FIGURE 8.2-1 - DEMOBILIZATION CHECKLIST

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

8.3 POST-INCIDENT REVIEW

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

Debriefs with 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.

FIGURE 8.3-1 - STANDARD INCIDENT DEBRIEFING FORM

INCIDENT DEBRIEFING FORM		
Incident Name:	**Facility:**	**Date:**
Name:	**Normal duty:**	

Incident Assignment:

- ☐ Incident Commander
- ☐ Safety Officer
- ☐ Legal Officer
- ☐ Liaison Officer
- ☐ Information Officer
- ☐ Operations Section Chief
- ☐ Logistics Section Chief
- ☐ Planning Section Chief
- ☐ Finance Section Chief
- ☐ Operations Personnel
- ☐ Logistics Personnel
- ☐ Planning Personnel
- ☐ Finance Personnel

Assignment Location:

- ☐ Command Post
- ☐ Staging Area
- ☐ Helibase
- ☐ Helispot
- ☐ Base
- ☐ Camp
- ☐ Other

Incident job description:

Positive aspects:

Areas of Improvement:

Signature:

8.3.1 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 and include the information listed below (as appropriate):

- Time, location, and date of discharge;
- Type of material discharged;
- Quantity discharged (indicate volume, color, length and width of slick, and rate of release if continuous);
- Source of spill (tank, flowline, etc.) in which the oil was originally contained, path of discharge, and impact area;
- Detailed description of what actually caused the discharge and actions taken to control or stop the discharge;
- Description of damage to the environment;
- Steps taken to clean up the spilled oil along with dates and times steps were taken;
- The equipment used to remove the spilled oil, dates, and number of hours equipment was used;
- The number of persons employed in the removal of oil from each location, including their identity, employer, and the number of hours worked at that location;
- Actions by the Company or contractors to mitigate damage to the environment;
- Measures taken by the Company or contractors to prevent future spills;
- The federal and state agencies to which the Company or contractors reported the discharge; show the agency, its location, the date and time of notification, and the official contacted;
- Description of the effectiveness of equipment and cleanup techniques and recommendations for improvement;
- The names, addresses, and titles of people who played a major role in responding to the event;
- A section identifying problems and deficiencies noted during the response event; a follow-up section should include recommended procedure modifications to make a future response more effective and efficient;
- All other relative information; and
- The Incident Commander's signature, printed Name, Title, and Date after the following statement: "The above information is true to the best of my knowledge and belief."

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APPENDICES

A. TRAINING / EXERCISES

B. CONTRACTOR RESPONSE EQUIPMENT

C. TANK TABLES, COMPANY FORMS, AND PLOT PLANS

D. HAZARD EVALUATION AND RISK ANALYSIS

E. CROSS-REFERENCES

F. ACRONYMS AND DEFINITIONS

G. OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

H. ADDITIONAL INFORMATION

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TRAINING / EXERCISES

Last revised: 09/01/2008

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APPENDIX A
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A.3.13 Anti-Drug Plan and Alcohol Misuse Plan Program Providers and Equipments

A.1 EXERCISE REQUIREMENTS AND SCHEDULES

- The Company participates in the National Preparedness for Response Exercise Program (PREP) in order to satisfy federal and state exercise requirements.
- During each triennial cycle, all components of the Plan (**FIGURE A.1-1**) must be exercised at least once.
- The EH&S Department is responsible for scheduling, maintaining records, implementing and evaluating this drill program, and ensuring that post-drill evaluation improvements are implemented.
- The EH&S Department commits to: working with Washington Department of Ecology (WDOE) to develop a procedure to systematically test spill management teams support that support Company vessels and facilities, scheduling WDOE drills in advance (as specified in **FIGURE A.1-2**) on the NWACP are exercise calendar, and providing WDOE with an opportunity to help plan/design and evaluate these drills.
- Due to the complexity of Tidewater's operations, WDOE and Ecology have agreed to an alternative drill schedule to ensure all facets of the operations are tested, as follows:
    - Tidewater is responsible for 3 Deployments each year: 1 vessel, 1 facility, and 1 land or pipeline drill in each 3 year cycle. Pipeline drill could have the possibility of being drilled once every 3 years, with the remaining 2 land deployments.
    - Tidewater is responsible for 3 201 TTX drills each year: 1 facility, 1 pipeline, 1 vessel. On years of WCD drills, Tidewater is only responsible for that one TTX drill, not the other 201 TTX drills.
    - Tidewater will work in drill design to vary locations and scenarios.
    - WCD will rotate between vessels and facilities every drill cycle (no pipeline worst case).
- **FIGURE A.1-2** provides descriptions of exercise requirements, **FIGURE A.1-3** provides an Emergency Response or Drill Form.

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

CORE COMPONENTS	DESCRIPTION
1. Notifications	Test the notifications procedures identified in the Area Contingency Plan (ACP) and the associated Responsible Party Response Plan.
2. Staff mobilization	Demonstrate the ability to assemble the spill response organization identified in the ACP and the associated Responsible Party Response Plan.
3. Ability to operate within the response management system described in the Plan: • Unified Command • Response management system	 Demonstrate the ability of the spill response organization to work within a unified command. 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 spill response organization to provide initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.
6. Containment	Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.
7. Recovery	Demonstrate the ability of the spill response organization to recover the discharged product.
8. Protection	Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the ACP and the respective industry response plan.
9. Disposal	Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.
10. Communications	Demonstrate the ability to establish an effective communications system for the spill response organization.
11. Transportation	Demonstrate the ability to establish multi-mode transportation both for execution of the discharge and support functions.
12. Personnel support	Demonstrate the ability to provide the necessary support of all personnel associated with response.
13. Equipment maintenance and support	Demonstrate the ability to maintain and support all equipment associated with the response.
14. Procurement	Demonstrate the ability to establish an effective procurement system.
15. Documentation	Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

FIGURE A.1-2 - EXERCISE REQUIREMENTS

EXERCISE TYPE	EXERCISE CHARACTERISTICS
Facility/QI notification	• Conducted quarterly. • Facility initiates mock spill notification to QI via Dispatch. • Dispatch documents time/date of notification, name, and phone number of individual contacted. • Document in accordance with form in **FIGURE A.1-3.**
Equipment deployment	• Conducted twice per year. • GRP strategies deployed twice per triennial cycle. • Include a combination of plan holder assets, contracted PRC assets and non-dedicated assets. • Test each type of dedicated equipment listed in the plan and personnel responsible for operating the equipment during each triennial cycle. • Conducted in all operating environments. • Demonstrate the ability to meet WDOE planning standards. • Response contractors listed in the plan must participate in annual deployment exercise. • WDOE drills must be schedule at least 30 days in advance. • Drill evaluation report will be mailed to WDOE for all WDOE schedule drills • Document in accordance with form in **FIGURE A.1-3.**
Tabletop	• Conducted annually. • Tests SMT's response activities/responsibilities. • Documents Plan's effectiveness. • Review 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. • WDOE drills must be scheduled 60 days in advance and worst case discharge drills 90 days in advance. • Drill evaluation report will be mailed to WDOE for all WDOE schedule drills. • Develop a master list of equipment and personnel names identified to fill both command post and field operations roles. Include western regional response list identification numbers for all response resources and personnel names, affiliation, home base and command post or field role. • Document in accordance with form in **FIGURE A.1-3.**
Wildlife Deployment	• One conducted in each three year cycle. • Deploy wildlife equipment and wildlife handlers. • Schedule at least 30 days in advance.

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

EXERCISE TYPE	EXERCISE CHARACTERISTICS
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, if passed. • Plan holders who have participated in a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise if the Company passes 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 if the Company passes the exercise.
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. • Company will re-drill objectives that are not successfully met. Significant failures will be retest within 30 days. • Company will update plan if required based on drill performance and findings of a drill evaluation.
Records of drills	• Company will maintain exercise records for five years following completion of each exercise. • Records will be made available to 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.).

FIGURE A.1-3 - EMERGENCY RESPONSE / EXERCISE FORM

Retain this form for a minimum of 3 years (for USCG/RSPA/MMS) and 5 years (for EPA).
(NOTE: For vessel Qualified Individual notification, ensure log entry is also made and retained for a minimum of 3 years.)

Date(s) performed: _____

☐ Exercise ☐ Actual spill

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

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

Location of exercise/spill: _____

Time started: _____ Time Completed: _____

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

Describe how the following objectives were exercised:

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

	Yes	No
Conducted briefing meeting	☐	☐
Established Incident Command Post	☐	☐
Confirmed source was stopped	☐	☐
Developed Health Safety Plan	☐	☐
Prepared ICS 201-OS	☐	☐
Established work zones and perimeter security	☐	☐
Developed short range Tactical Plan	☐	☐
Developed long range Tactical Plan	☐	☐

Proper Notifications:

Notification to Person-In-Charge (PIC)	☐	☐
Name of PIC notified: _____	☐	☐
Notification to Tidewater Dispatcher	☐	☐
Name of person notified: _____	☐	☐
Notification to Qualified Individual (QI)	☐	☐
Name of QI notified: _____	☐	☐
Time QI notified: _____	☐	☐
Time QI responded: _____	☐	☐
Release Incident Report completed	☐	☐
Notification to agencies completed (attach log)	☐	☐

FIGURE A.1-3 - EMERGENCY RESPONSE / EXERCISE FORM, CONTINUED

Transportation/Communication System:

	Yes	No
Established 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:	☐	☐
Provider name: _____		
Helicopter/Sea plane deployed:	☐	☐
Call sign: _____		

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

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

Who contacted - (Name of individual and OSRO): _____

When contacted: _____

Response time projection for deployment: _____

Type and amount of containment used: _____

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

Where? _____

Spill management team's ability to coordinate spill response with FOSC, SOSC, and applicable agencies:

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

List person and agency represented:

_____

_____

_____

_____

Spill 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-impact photographs taken?	☐	☐
Were NRDA specialists mobilized?	☐	☐

FIGURE A.1-3 - EMERGENCY RESPONSE / EXERCISE FORM, CONTINUED

	Yes	No
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:

FIGURE A.1-4 - EPA REQUIRED RESPONSE EQUIPMENT TESTING AND DEPLOYMENT DRILL LOG

Records are maintained on-site. Other versions of this form may be used. Refer to **APPENDIX H** for samples of completed forms.

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification (if applicable)	

FIGURE A.1-5 - QUALIFIED INDIVIDUAL NOTIFICATION DRILL LOG

Records are maintained on-site. Other versions of this form may be used. Refer to **APPENDIX H** for samples of completed forms.

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Others Contacted	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Others Contacted	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Others Contacted	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Others Contacted	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

FIGURE A.1-6 - SPILL MANAGEMENT TEAM TABLETOP EXERCISE LOG

Records are maintained on-site. Other versions of this form may be used. Refer to **APPENDIX H** for samples of completed forms.

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual	
Participants	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual	
Participants	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual	
Participants	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual	
Participants	
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

FIGURE A.1-7 - RESPONSE EQUIPMENT INSPECTION FORM

Records are maintained on-site. Other versions of this form may be used. Refer to **APPENDIX H** for samples of completed forms.

INSPECTOR	DATE	COMMENTS

A.2 TRAINING PROGRAM

Personnel are properly trained in the operation and maintenance of equipment to prevent oil discharges and applicable pollution control laws and regulations. The Company conducts a comprehensive and systematic Terminal Operations Training Program for its maintenance and operations personnel. The program consists of an extensive Company orientation program involving supervised on-the-job training and the satisfactory completion of written and oral examinations, or proficiency demonstrations.

This program is provided for all new bulk liquid handling and storage employees and focuses on the operations and safety procedures that must be followed while in the terminal operating areas. A portion of the training includes information on federal, state, and local pollution regulations and environmental protection. It specifically addresses proper procedures for oil transfer operations and hazardous waste handling.

All operations personnel are trained in procedures focused on the prevention of oil spills. All personnel who have direct responsibility for performing or overseeing the transfer, storage, and handling of oil, as well as maintenance at the terminal, receive this training. Training is consistent with all state and federal requirements for pollution prevention. In addition, all operations personnel receive 24 hour Hazardous Waste Site Operations training and 8 hour annual refresher training as described by OSHA 29 CFR 1910.120. All training, including pollution prevention, is documented via the training database. Terminal job titles are subject to the oil spill prevention training requirements of WAC 173-180-60 Personnel Qualifications to identify a Person In Charge (PIC). The corresponding regulatory job definitions are identified in the following table.

Regulatory Job Definition	Position Title
Operations and Supervisory Personnel (Key)	Terminal Manager Terminal Operators Leadmen Tankermen
Management Personnel	Terminal Manager Terminal Supervisor
Maintenance Personnel	Terminal Operators Leadmen
Indirect Personnel	Construction/Maintenance Contractors

A.2.1 Terminal Operations Training Program

This program is comprised of a series of training offerings, the sum total of which accomplishes the objective of certifying personnel as Terminal Operators to perform or oversee the transfer, storage and handling of oil. These offerings include, but may not be limited to:

Training Title	
1.	New Employee Orientation and OJT
2.	Terminal Operator Training
3.	General Safety Training
4.	Management Training
5.	24-Hour Hazwoper (Hazardous Waste Ops and Emergency Response)
6.	8-Hour Hazwoper – Annual Refresher
7.	Discharge Prevention and Contingency Plan Overview
8.	Incident Command Training
9.	Drug/Alcohol Education
10.	Emergency Shutdown Drill

FIGURE A.2-1 identifies each core training topic as required by WAC 170-180-060 and lists the corresponding Company training offering which address these topics. Training in each of the core topic areas may be attained by attending one or more of the listed training offerings. It also lists the approximate hours of training that should be devoted to each training topic. Actual training hours may fluctuate depending on the experience level of the trainee.

A.2.2 New Employee Orientation and OJT

New employees are guided through a period of initial training during which they receive instruction in job related operational and safety procedures. This orientation period is intended to prepare trainees to begin functioning in limited and specific capacities as they work toward completion of all requirements for designation as a Terminal Operator. As such, this training fulfils part of Terminal Operator training requirements. Minimum requirements to have been met upon completion of the New Employee Orientation and OJT Program are outlined in Section IV. A written certification exam will be administered to verify the knowledge and skill levels appropriate to pollution prevention goals.

FIGURE A.2-1 - TERMINAL OPERATIONS TRAINING AND CERTIFICATION PROGRAM

					PERSONNEL CATEGORIES (per WAC 173-180-060)			
WAC 173-180-060 OPERATIONS CORE TOPICS	TBL TRAINING TITLES (See Note 1)	TYPE OF INSTR (See Note 2)	TRA HRS.	EVAL (See Note 3)	(KEY) OPS & SUPV	MGT.	MAINT.	INDIRECT
1. Overview of Oil Handling Ops	1, 2	C	1	WE OE	X	X	X	X
2. Ops Procedures/ Checklists	1, 2	C/O	88 (Note 4)	WE OE PD	X			
3. Problem Assessment - Human Risk Factors	1, 2	C/O	1	WE OE PD	X	X		
4. Preventative Maint. Awareness	1, 2	C/O	1	WE OE PD	X		X	
5. Enviro. Sensitivity Awareness	1, 5, 6, 7, 8	C	1	WE OE	X	X	X	X
6. Spill Prevention Plan	1, 5, 6, 7, 8	C	1	WE OE	X	X	X	
7. Facility Ops Manual	2	C	1	WE OE	X	X	X	
8. Spill Response C-Plan	5, 6, 7, 8	C	1	WE OE	X	X	X	
9. Decision Making for Abnormal Events and Emergencies (Shut Down Procedures)	1, 5, 6, 7, 8, 10	C/O	1	WE OE PD	X	X	X	X
10. Routine & Emergency Communications	1, 5, 6, 7, 8, 9	O	1	WE PD	X			
11. Prevention & Response Laws & Regulations	1, 5, 6, 7	C	1	WE OE	X	X	X	
12. Drug/Alcohol Awareness	1, 9	C/O	1	WE OE	X	X	X	X
13. Mgt. Role in Ops & Spill Prevention	2, 4, 5, 6, 7, 8	C	1	WE OE		X		
		TOTAL HOURS	100		99	10	9	1 - 4

Note 1: 1 New Employee Orientation & OJT
2 Terminal Operator Training
3 General Safety Training
4 Management Training
2 4-Hour Hazwoper
8 8-Hour Annual Refresher
9 Discharge Prevention & Contingency Plan Overview
10 Emergency Shutdown Drill

Note 2: C = Classroom
O = On-the-Job Training (OJT)

Note 3: WE = Written Exam
OE = Oral Exam
PD = Practical Demo

Note 4: Training hours include 48 hours OJT experience as required by 33 CFR 154.710(b)

A.2.3 Key Supervisory, Operations and Maintenance Personnel

Company employees involved in oil storage and handling operations, and maintenance activities must complete the Terminal Operations Training Program and certification exam before being allowed to work unsupervised in their designated job assignment. Terminal management personnel must complete the training program prior to assuming management responsibilities.

A.2.4 Management Personnel

Terminal managers/supervisors, if not included in "key personnel" training, are given an abbreviated version of the Terminal Operations Training Program prior to assuming their respective management positions. This instruction consists of the following topics:

- Overview of Oil Handling Ops
- Problem Assessment - Human Risk Factors
- Environmental Sensitivity Awareness
- Spill Prevention Plan - Key Components
- Decision Making - Abnormal Events
- Prevention and Response Laws and Regulations
- Drug and Alcohol Education
- Management Role in Operations and Spill Prevention

The matrix provided in **FIGURE A.2-1** also lists these topics along with the recommended training hours for each topic.

A.2.5 Indirect Personnel

Indirect personnel subject to these training requirements include outside contractors and other personnel that are not employees but that may be involved in activities at the terminal that may indirectly involve the risk of an oil spill. These activities generally include construction and excavation operations in the vicinity of oil storage or transfer equipment (e.g., digging next to an active oil transfer pipeline). Due to their indirect association with oil transfer and storage operations at the terminal, the required level of training for these personnel is lower than that for other personnel and contractors.

The training that the Company requires of indirect personnel consists of a pre-entry briefing of the Company's safety and environmental policy. The topics covered in this briefing include, but are not limited to the following:

- Terminal operations overview
- Emergency procedures and notifications
- Restricted work areas
- Equipment use/material handling safety
- Drug and alcohol abuse
- Environmental awareness
- Oil spill impacts

Although the training topics do not specifically address spill prevention measures, procedures for activities such as obtaining area work clearances and safe work permits and conducting lock out/tag out activities are covered. The inclusion of these topics in the training is intended, at least in part, to minimize the potential for outside contractors and other indirect personnel to accidentally cause an oil spill. All indirect personnel are then given a document to endorse confirming their knowledge of the safe work procedures that must be followed while working in the terminal. The record of this briefing is kept at the terminal office.

A.2.6 Refresher Training

Oil spill prevention and response refresher training is conducted annually for all personnel who have direct responsibility for performing or overseeing the transfer, storage, handling, maintenance, or monitoring of oil at a Company terminal, i.e., key personnel.

Refresher training covers a variety of topics including:

- Changes in the topics listed in **FIGURE A.2-1**.
- Awareness of environmental sensitivity and oil spill impacts.
- Review and analysis of oil spills that may have occurred during the previous year.
- Emergency Shutdown Procedures.
- Emergency Spill Response and Site Safety Management.

For management and operations/supervisory personnel, pollution prevention discussions are conducted during monthly Safety and Pollution Prevention meetings which also include ongoing training in safety, communications, and awareness issues.

Attendance at each meeting is tracked to ensure all employees participate on a regular basis. Spill prevention topics are always addressed at these meetings.

Included in the annual refresher training is a spill prevention and response practical exercise. The exercise may consist of a table-top drill involving a particular abnormal operations event at the terminal and the procedures that personnel should use to prevent a spill and control the situation.

Indirect personnel will receive the pre-entry briefing annually - as refresher training. A review and analysis of oil spills that may have occurred at the terminal during the previous year will also be presented as a part of the briefing. The time required to complete this refresher training program is approximately 20-30 minutes.

A.2.7 Certification Program

The certification program for key Tidewater supervisory and operations personnel at Tidewater Terminals is designed to ensure that these personnel are competent to perform the functions associated with their positions and possess a heightened awareness of pollution prevention. The specific personnel that require certification are the:

- Managers (as applicable)
- Terminal Operators
- Leadmen
- Tankermen

All applicable personnel will be required to be certified regardless of previous experience or training.

The certification program will consist of satisfactorily completing all aspects of the Terminal Operations Training Program i.e., training sessions, performance demonstrations, and exams as set forth in **FIGURE A.2-1**. Certification exams will consist of a written, and/or oral, and/or demonstration test combined with a practice exercise involving emergency oil spill response. The observation of performance requirement under WAC 173-180-060 will be satisfied through the performance demonstrations as verified by trainers and managers.

A.2.7 Certification Program, Continued

The written, and/or oral, and/or demonstration test is intended to evaluate job specific knowledge in relation to the course topics required under WAC 173-180-060. A passing grade of 100% has been established for written exams and practical demonstrations. If any trainee achieves less than the required 100% passing grade, a remedial session will be conducted and a retest will be administered.

The practical exercise portion of the certification program will consist of a drill involving a hypothetical oil spill event, and the evaluation of the sequence of procedures the employee takes to respond to the situation (oil spill and emergency shutdown procedures). The standard recertification program for Company Terminals consists of the following:

1. Pass the written and practical certification exam once every 3 years.
2. Satisfactory completion of the required refresher training annually.

Company personnel who are clearly responsible for causing an oil spill may be required to complete a remedial training program prior to resuming performance of the activities that resulted in the spill. Remedial training will specifically address skill or knowledge which relate to the circumstances of the spill. It may also include a performance demonstration in the activity that caused the spill.

A.2.8 Grandfathering and Equivalency Training

The large majority of Company personnel subject to WAC 173-180-060 have been employed at Company Terminals for a number of years and have received a significant amount of training on an annual basis. Due to the recent incorporation of additional spill prevention and response courses, some employees have not received specific training in all topics required by WAC 173-180-060. Current Company employees are, however, considered to have met the oil spill prevention training requirements if they have previously completed the Company New Employee Orientation and OJT Program, and participated in the HAZWOPER and annual refresher courses, and have been performing their respective duties and responsibilities satisfactorily. These individuals will receive an Equivalency Certificate pending documentation of successful completion of proficiency demonstrations and core topic training.

Training for those required core topics that were not included in the Orientation and OJT program will be covered in future refresher training and so documented.

In some cases, employees subject to the above regulations may not have received training in the current Orientation and OJT programs due to their seniority and past experience at the Company. Management has certified in writing (Equivalency Certificate) that their on-the-job training and/or experience is equivalent to the New Employee Orientation/OJT program. However, these personnel also participate in annual refresher training and will, therefore, receive certification in core topic training as they participate in the training cycle.

A.2.9 Training and Certification Records

Each Company employee who successfully completes the Terminal Operations Training is updated in the training database reflecting successful completion of training requirements for designation as a Terminal Operator. The training record is then placed in the terminal employee's file along with documentation of completion of the training.

All files related to employee training and certification, including equivalency certifications, are maintained by the Terminal Manager/Supervisor. In addition, Tidewater maintains a computerized training and certification tracking system that records a variety of information and dates including:

- Training received
- Completion dates of the various training programs
- Certification date
- Refresher training dates
- Recertification dates

A.2.10 Training Materials

Training Program materials consist of a series of Operational Procedures, course outlines, and the designated instructors. In addition, each instructor may prepare and use a number of handouts, overheads, slides, or other materials to enhance the training process. These training materials may change from class to class depending on the instructor and new information that may become available on the given subject matter. Trainees may consult a number of reference documents to assist them in answering many of the questions in the exams. Additional handouts or other training materials may be provided to the trainee as appropriate.

A.2.11 Trainer Qualifications

Trainer qualifications will vary. Trainers are generally terminal employees with extensive experience in, or knowledge of, the course topic. Trainers will have demonstrated competency in the subject matter for which they are providing instruction. They will also be familiar with the training materials and evaluation responsibilities currently in effect in this program. In some cases they may be senior personnel from the environmental or the health and safety department.

The Company utilizes a written Tankerman Training and Procedures program developed to satisfy the U.S. Coast Guard on which all facility operations personnel are formally trained prior to being given authorization to perform barge transfer operations. The Company also has a Terminal Operators training program that all shore side operations personnel must complete. The Coast Guard annually inspects the facility to ensure compliance with the applicable regulations. The following table lists training requirements for spill responders:

FIGURE A.2-2 - 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. • New employees, prior to being assigned any spill response responsibilities will be trained in the use of Geographic Response Plan which is part of the Company's Integrated Contingency Plan (Supplemental Volume). • Plan will be reviewed annually with all employees and contract personnel. • The Personnel Response Training Log is located in **FIGURE A.2-5**.
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 eight hours of actual field experience. • Spill responders having potential exposure to hazardous substances at levels exceeding permissible exposure limits must have 40 hours of initial training off-site and 24 hours of actual field experience. • On-site management/supervisors required to receive same training as equipment operators/general laborers plus eight hours of specialized hazardous waste management training. • Managers/employees require eight hours of annual refresher training. • HAZWOPER emergency response levels are provided in **FIGURE A.2-6**
Spill Management Team personnel training	• See recommended PREP Training Progam Matrix (**FIGURE A.2-4**).
Training for casual laborers or volunteers	• Company will not use casual laborers/volunteers for operations requiring HAZWOPER training.
Wildlife	• Only trained personnel approved by USFWS and appropriate state agency will be used to treat oiled wildlife.
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 the Plan. • Training records will be retained at each facility or pipeline office; EHSS Department will document all applicable training.

FIGURE A.2-3 - TRAINING PROGRAM MATRIX

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

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	SPILL MANAGEMENT TEAM (IMT)	FACILITY/ VESSEL 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 (MSDS), special handling procedures, health and safety hazards, spill and fire fighting procedures	x	x	x
Procedures the facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with internal or external cargo transfers, storage, or use	x		x
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or prevent an oil discharge	x	x	x
Operational capabilities of the contracted OSROs to respond small, medium, and large discharges	x	x	x
Responsibilities and authority of the Qualified Individual (QI) 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 • Finance	x	x	x

FIGURE A.2-3 - TRAINING PROGRAM MATRIX, CONTINUED

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

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	SPILL MANAGEMENT TEAM (IMT)	FACILITY/ VESSEL 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 cleanup and protection • Spill trajectory analysis • Use of dispersants, in-situ burning, and bioremediation • Waste storage and disposal considerations		x	
Hazard recognition and evaluation		x	
Site safety and security procedures		x	
Personnel management, as applicable to designated job responsibilities		x	
Procedures for directing the deployment and use of spill response equipment, as applicable to designated job responsibilities		x	x
Specific procedures to shut down 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 • Grounding or stranding • Collision • Hull failure • Excessive list • Explosion or fire • Equipment failure • Failure of secondary containment system			x
Name of the Person in Charge (PIC) and how to contact him or her			x
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			

FIGURE A.2-3 - TRAINING PROGRAM MATRIX, CONTINUED

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

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	SPILL MANAGEMENT TEAM (IMT)	FACILITY/ VESSEL PERSONNEL
The role of the Qualified Individual in the post discharge review of the plan to evaluate and validate its effectiveness	x		
The Area Contingency Plan (ACP) for the area in which the facility is located	x	x	x
Site safety and security procedures		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
The responsibilities and duties of each oil spill management team within the organizational structure	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	

FIGURE A.2-4 - PERSONNEL RESPONSE TRAINING LOG

NAME	Year:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:	Year:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:	Year:	TABLETOP DATE:	DEPLOYMENT LOCATION: DATE:	DEPLOYMENT LOCATION: DATE:

PHMSA 000089419

FIGURE A.2-5 - 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)(I) **Competencies:** • Understand what hazardous substances are, and the risks associated with them in an incident • Understand the potential outcome 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 **Time estimate:** 24 **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

FIGURE A.2-5 - HAZWOPER EMERGENCY RESPONSE LEVELS, CONTINUED

LEVEL	DESCRIPTION
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 Hazardous Material Specialist Level **Frequency:** Initial **Time estimate:** 24 **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
5	**Incident Commander** of an industry spill response team assuming control of the incident **Training requirement:** HAZWOPER On-Scene Incident Commander Level **Frequency:** Initial **Time estimate:** 24+ **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 • Understand the importance of decontamination procedures

A.3 DRUG AND ALCOHOL POLICY

A.3.1 Preface

The Company officers and managers are committed to clarifying questions and assisting employees regarding this policy and program. Each employee is encouraged to thoroughly read this policy and seek assistance in understanding it as needed. The Company management maintains an "open door" policy to all of its employees relative to this policy and program.

As with all other Tidewater Barge Lines, Inc. policies and guidelines, these may be amended, deleted, or exceptions to them made by the Company for any reason and at any time. These policies and guidelines are not intended as, nor should they be construed to create terms of an express or implied contract of employment at Tidewater Barge Lines, Inc. / Tidewater Terminal Company or any type of promise or guarantee of specific treatment in specific circumstances.

A.3.2 Policy Statement

It is the Company policy to maintain a drug and alcohol free workplace. Employees who presently engage in the illegal sale, use, possession, or transfer of illegal drugs at any time or are impaired by alcohol during work hours; will be subject to disciplinary action, up to and including termination.

A.3.3 Introduction

A.3.3.1 Statement of Need

Tidewater Barge Lines, Inc. (the Company) and its subsidiary Companies conduct a wide variety of business activities. These activities call for employees to operate vessels, barges, shipyard heavy equipment and machinery, transport fuel and manage the distribution of petroleum products. Substance abusing employees could endanger the safety of all employees, the general public and the environment. These types of operations make it vitally important to ensure that Company personnel are drug and alcohol free.

The Company is also regulated by several federal and state agencies that require the Company to maintain an extensive drug and alcohol testing program. These federal and state agencies include the Department of Transportation (DOT), the United States Coast Guard (USCG) and the Research and Special Programs Administration, (RSPA).

The Company's commitment to maintaining a safe and secure workplace requires a clear policy and supportive programs relating to the detection, treatment and prevention of substance abuse by its employees.

A.3.3.2 Goal

It is the goal of the Company to provide a safe workplace by eliminating the hazards to health and job safety created by alcohol and other drug abuse. We believe this goal to be in the best interest of our employees and our customers. This policy will apply to all employees of the Company while on the job and when an employee's off-the-job or off-premises substance abuse impairs work performance or undermines the public confidence in, or harms the reputation of, the Company. This policy will also apply to employees of firms doing business with the Company while on our premises.

Although the Company has no intention of intruding into the privacy of its employees, we recognize that abuse of illegal drugs and alcohol off the job may impair job performance. Our goal is to ensure that employees report to work in condition to perform their duties safely and efficiently in the interest of their fellow workers and customers as well as themselves.

A.3.3.3 Procedure

To achieve the goal of an alcohol and drug-free workplace, the Company will:

- Maintain a new hire program designed to test for the present use of illegal drugs.
- Conduct tests for illegal drug use and alcohol intoxication in certain situations. These situations include (1) Preemployment testing, (2) reasonable suspicion, (3) following treatment or rehabilitation, (4) post accident testing and (5) random testing.
- Comply with the DOT, USCG and RSPA drug and alcohol testing regulations which include various types of drug and alcohol testing, including mandatory random alcohol testing.
- Search personal property located on Company premises as it deems appropriate to enforce this policy.

A.3.4 Prohibitions

A.3.4.1 Alcohol

The Company prohibits employees from:

- Using alcohol during working hours.
- Reporting to work or working while under any influence of alcohol.
- Possessing alcohol during working hours, any time they are on-duty, while on Company property, in a Company vehicle or vessel, or operating Company equipment.
- Performing any safety-sensitive duties within four hours of consuming any alcohol.

A.3.4.2 Controlled Substances Prohibited

The Company prohibits employees from:

- Using, selling, possessing, distributing, dispensing, or manufacturing illegal drugs at any time, on or off the job.
- Being under any influence of controlled substances at any time they are on duty, Company property, job sites, in a Company vehicle or vessel or operating Company equipment.
- Reporting to or working while having any detectable level of an illegal drug or any illegal drug metabolite in their body.

The only exception is the taking of prescribed drugs under the direction of a physician where the medication does not seriously impair the employee's performance or safe operation of their assigned duties.

A.3.4.3 Paraphernalia Prohibited

The Company prohibits employees from using, possessing, or distributing any drug related paraphernalia on Company premises, job sites, in Company vehicles or during working hours. Any employee finding any suspected drug or alcohol related paraphernalia is responsible for notifying his or her manager regarding the discovery.

A.3.4.4 Impairment Prohibited

The Company prohibits employees from reporting to work or working when impaired by any substance, legal or illegal. Employees must inform their manager when they are prescribed any controlled substance that might impair their ability to safely perform their duties or seriously affect their job performance.

A.3.4.5 Tampering with a Specimen Prohibited

Employees and applicants are prohibited from tampering with urine or breath specimens in order to conceal illegal drug or alcohol use. This includes watering down, adulterating, or substituting a specimen. Furthermore, the Company prohibits employees from possessing products used to obstruct the urine or breath analysis. Evidence of specimen tampering may result in disciplinary action, up to and including termination. Specimens showing signs of possible dilution may result in additional testing.

A.3.4.6 Anti-Drug Testing Products

The Company prohibits from using, possessing, or distributing any product marketed to "beat the drug test" on Company premises, job sites, in Company vehicles or during working hours. Any employee finding any suspected anti drug testing product is responsible for notifying his or her manager regarding the discovery.

A.3.4.7 Refusing to Take a Drug or Alcohol Test

No employee or applicant can refuse to take a drug or alcohol test when ordered by a supervisor, manager, or agent of the Company. Refusal to take a drug or alcohol test by an employee will be grounds for termination.

A.3.4.8 Lawfully Obtained Controlled Substances

Because certain prescription drugs can have an impact on employee's safety, the Company limits controlled substance use whether or not it is legal or illegal. The use of controlled substances that are lawfully obtained and properly used shall be permitted only if they do not interfere with any safety-sensitive employee's safe performance of his or her job.

The Company requires employees who are in a safety-sensitive positions and taking a controlled substance that might impair him or her to obtain, in advance of working in the safety-sensitive position, written authorization from his or her physician who prescribed the medication. The employee should present a job description to their physician so that the physician can accurately determine if the medication poses any risk to safety.

This specifically includes all medication containing labels warning that use may impair one's ability to operate machinery, vehicles, equipment or do one's job in a safe manner.

Self-medication of a legally obtained, but not prescribed, controlled substance by any employee in a safety-sensitive position is prohibited unless authorized by a medical practitioner who is licensed to prescribe the drug.

All employees are requested, for safety reasons, to carry prescribed medication in its original container and clearly labeled with the employee's name.

Any over-the-counter medicine ingested during work hours must be taken in dosages as instructed on the containers and not impair the employees ability to do their job in a safe, alert and efficient manner.

A.3.5 Substance Abuse Testing

A.3.5.1 Personnel Subject to Testing

Generally, to enforce this policy, the Company conducts the following types of drug or alcohol tests:

- All applicants are subject to pre-placement testing for illegal drug use.
- All employees are subject to post-accident, reasonable cause and unannounced random drug and alcohol testing.

In addition to Company based testing, all boat crew members and tankermen are subject to drug and alcohol testing mandated by United States Coast Guard regulations as described in **APPENDIX A.3.11**.

In addition to Company based testing, all personnel working on pipelines facilities subject to RSPA regulations are subject to drug and alcohol testing described in **APPENDIX A.3.12**.

In addition to Company based testing, all personnel possessing a Commercial Motor Vehicle driver's license and who drives a Commercial Motor Vehicle are subject to DOT / Federal Motor Carrier Safety Administration regulations are subject to drug and alcohol testing as described in.

A.3.5.2 Pre-Placement Testing

The Company has a pre-placement testing program for all applicants accepted for employment. The Company's offer to hire an employee is contingent upon that employee passing a urine test for illegal use of drugs.

During the application process the Company personnel in charge of hiring will notify all applicants that any offer of employment is contingent upon the applicant successfully passing a drug test.

If the applicant fails to report for a scheduled pre-placement test or fails to successfully provide an acceptable urine specimen, the Company may terminate the conditional offer of employment.

If there is any indication that the applicant tampered with the specimen, the Company may also terminate the offer of employment.

The Company may not accept drug test results indicating abnormal creatinine, specific gravity, or pH levels.

A.3.5.3 Post Accident Testing

The Company may test employees for the illegal use of drugs and the presence of alcohol, when they are directly involved in any incident:

1. That causes an injury requiring professional medical attention; or,
2. Substantial loss or damage to property or equipment, as determined by Company management; or,
3. Flagrant violation of Company policy of failure to follow prudent operating methods; or,
4. A significant discharge of a reportable substance, as determined by Company management.

Any employee involved in a vehicular accident shall report, as soon as possible, the accident to his or her Facility, Safety or Designated Employer Representative. The employee shall make him or herself readily available for testing. The Company considers an employee to have been involved in an incident if his or her order, action or failure to act may be a causative factor, or cannot be ruled out as a causative factor in that incident.

A.3.5.3 Post Accident Testing, Continued

The immediate supervisor in charge of the area in which the incident occurs is responsible to ensure all appropriate persons are tested for drugs and alcohol.

A.3.5.4 Reasonable Suspicion Testing

When an officer, manager, supervisor, or agent of the Company discovers evidence, receives information, or observes behavior or other indicators, that an employee may be impaired, that employee may be subject to reasonable cause testing for the illegal use of drugs and/or the presence of alcohol.

The person initiating the testing should inform the employee of the facts supporting the reasonable suspicion. The person initiating the testing should then direct the employee to provide a urine specimen or breath specimen as soon as practical.

The Company will remove the employee in question from his or her position until the Company receives the test results.

Employees may be subject to testing for illegal drugs or alcohol, by urinalysis and breathalyzer, if there is any information, evidence or other reason to suspect that any employee:

- Has reported to work impaired by illegal drugs or alcohol; or,
- Is impaired by illegal drugs or alcohol while on Company premises or any Company vessel; or,
- Is working impaired by illegal drugs or alcohol.

Among other indications, but not limited to these, the Company can base reasonable suspicion on:

1. Observable behavior such as direct observation of controlled substance or alcohol use or where the employee exhibits any possible physical symptom or manifestation of being under any influence of illegal drugs or alcohol.
2. Observations or patterns concerning the appearance, attitude, behavior, speech, attendance or odors exhibited by the employee.
3. Observations or indications of chronic or withdrawal effects of controlled substances or alcohol.
4. Reckless or negligent operation of equipment, machinery or Company vehicles.
5. Flagrant or recurrent violations of established safety or operating procedures.
6. Abnormal conduct or erratic behavior.
7. Deterioration in work performance or quality of work.
8. Inability to follow instructions or any exhibited pattern of mistakes or errors.
9. Discovery of paraphernalia, illegal drugs or alcohol in an area that the employee has individual access.
10. A report of illegal drug use or being under any influence of alcohol by a reliable and credible source, as determined by the Company.
11. Evidence that an employee has tampered with a drug test during his or her employment.
12. Evidence or arrest showing that an employee has used, sold, possessed, solicited or transferred controlled substances while working for the Company.

A.3.5.5 Random Testing

The Company may conduct testing for the illegal use of drugs and alcohol through a random selection process. All employees working in any safety sensitive positions shall be subject to random testing.

A.3.5.6 Return to Work Testing

Prior to returning to work following a positive drug or alcohol test, or after the employee has been identified as violating the drug and alcohol use policy, the employee will submit to a return to work drug and/or alcohol test. The test results must show negative for illegal drugs or alcohol.

A.3.5.7 Follow-Up Testing

After returning to work following a positive drug or alcohol test, or after the employee has been identified as violating the drug and alcohol use policy, the employee will submit to random and unannounced testing.

A.3.5.8 Refusal to Submit to Testing

Refusal to submit to any testing is a violation of the Company drug and alcohol policy and will result in removal from service, when practical and disciplinary action, up to and including termination. The following constitute a refusal to take a test:

1. The employee or applicant fails to appear for any test within a reasonable time, as determined by the Company, after being directed to do so by a supervisor.
2. The employee fails to remain at the testing site until the testing process is complete.
3. A DOT regulated employee fails to provide a urine specimen for any drug test required by their respective DOT agency regulations.
4. In the case of a directly observed or monitored collection in a drug test, the employee fails to permit the observation or monitoring of your provision of a specimen.
5. The employee fails to provide a sufficient amount of urine when directed and it has been determined, through a required medical evaluation, that there was no adequate medical explanation for the failure.
6. The employee fails or declines to take a second test that the Company or collector has directed you to take.
7. The employee fails to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process, or as directed by the Designated Employer Representative (DER) as part of the "shy bladder" procedures.
8. The employee fails to cooperate with any part of the testing process (e.g., refuse to empty pockets when so directed by the collector, behave in a confrontational way that disrupts the collection process).

A.3.5.9 Directly Observed Specimen Collection

Employees shall submit to directly observed specimen collections under the following situations:

- The laboratory reported to the MRO that a specimen is invalid and the MRO reported to you that there was not an adequate medical explanation for the result.
- The MRO reported to you that the original positive, adulterated, or substituted test result had to be cancelled because the test of the split specimen could not be performed.
- During a previous test an adulterant was discovered or the specimen could not be tested due to the presence of an unidentifiable substance in the specimen.
- Invalid specimen and the MRO reports that there was not an adequate medical explanation for the result and the split specimen test could not be performed (e.g., split lost, inadequate volume).
- The Company may direct an observed collection if the test is a return-to-duty or follow-up test.
- The collector observes materials brought to the collection site or the employee's conduct clearly indicated an attempt to tamper with a specimen.
- The temperature on the original specimen was out of range or the specimen appeared to have been tampered with.

In all cases, any directly observed specimen collection will be conducted with the use of a same-gender direct observer. Refusing to submit to a directly observed specimen collection when any of the above situations exist will result in disciplinary action, up to and including termination.

A.3.5.10 Testing Positive for Illegal Drugs

In general, an employee who tests positive for illegal drugs will be removed from duty as soon as possible and face disciplinary action, up to and including termination.

The Company will notify the United States Coast Guard of any positive tests for illegal drugs and through USCG actions the crewmember may experience revocation or suspension of any possessed USCG license or document.

A.3.5.11 Testing Positive for Alcohol Use

In general, an employee who tests positive for alcohol use will be removed from the duty as soon as possible. If the positive test is a result of on-the-job alcohol use the employee will face disciplinary action, up to and including termination.

If the positive test is a result of off-the-job alcohol use the employee will face disciplinary action, up to and including termination; however, the Company may permit the employee, in lieu of termination, to enroll in a professionally administered counseling or rehabilitation program. Upon successful completion, the employee will be reinstated, based on job availability, subject to follow-up testing.

Failure to follow treatment recommendations, any future policy violations or positive drug or alcohol tests may lead to termination. The employee will be responsible for all costs incurred during the return to work process, including, but not limited to: assessment and evaluation costs, drug and alcohol testing, treatment and counseling. Employees regulated by the DOT will be required to meet all return-to-duty requirements set forth by the DOT.

A.3.5.12 Specimen Contamination or Dilution

Tampering with a specimen or intentionally using any means to conceal drug or alcohol use (e.g., by diluting a specimen or body fluids or possessing products used to hamper urinalysis) is strictly prohibited. Evidence of specimen tampering may result in disciplinary action, up to and including termination.

A.3.5.13 Inability to Provide an Adequate Urine Specimen (Shy Bladder)

If the employee cannot immediately provide an adequate specimen, he or she must remain at the collection site and will be given a reasonable opportunity to complete the specimen collection process. The employee will be under direct observation of the collector or a Company representative.

The employee will have three hours to provide an adequate specimen. The employee can drink fluids, up to 40 ounces of fluids distributed reasonably throughout the three hour period, or until the individual has provided a sufficient urine specimen, whichever occurs first.

If the employee is unable to provide an adequate specimen in the three hour period, the collector has to stop the collection process and notify the Company's designated employer representative.

Under no circumstances can a collector "combine" urine collected from separate voids to create one specimen of sufficient volume.

An employee who cannot provide an adequate urine specimen within the three hour period will be required to obtain a medical evaluation from a physician to investigate possible medical conditions that prohibit the employee from providing a specimen. This physician should be a specialist (e.g., an urologist). If the physician determines that no condition exists that should prevent the employee from providing a specimen within a three hour period, the previous attempt will be considered a refusal to test. The Company will not permit additional attempts at a specimen collection.

A.3.5.14 Violation of Policy

Violation of this policy shall be subject to disciplinary action, up to and including termination. Possession, transportation or sale of any illegal drug(s) on Company vessels or premises can also result in criminal prosecution.

A.3.5.15 Confidentiality

The Company considers results of any drug or alcohol testing, inspections or rehabilitation confidential. The Company will treat results of drug and alcohol test as confidential as feasible or appropriate. The Company will permit access to those entities that, as a matter of law, are permitted access to drug or alcohol testing records. The right to confidentiality does not apply when the information is used as a defense in a civil, criminal or administrative matter (i.e., unemployment compensation, grievance or arbitration hearings, etc.). In these cases the Company may release drug and alcohol test results when defending employment related claims.

A.3.6 Testing Procedural Safeguards

A.3.6.1 Laboratory Selection

The Company will use a Department of Health and Human Services qualified laboratory to analyze the urine specimens. All samples will be analyzed for the following drugs: marijuana, cocaine, opiates, phencyclidine (PCP) and amphetamines.

The Company will also test for alcohol by breathalyzer or urine. In addition to the illegal drugs listed above, the Company may test for other illegal drugs as it deems appropriate.

A.3.6.2 Challenging a Positive Result

The Company will utilize split specimen procedures for its drug testing. Each specimen will be split into two samples, a primary and secondary sample.

If the primary specimen is positive, the employee may request the MRO to direct the secondary sample to a different, Company authorized and DHHS-certified laboratory for presence of controlled substances. The employee must notify the MRO about his or her request within 72 hours after having been notified of a verified positive test result. The employee requesting this test shall be responsible for reimbursing the Company for all costs associated with the retesting of the split specimen (shipping, handling, analysis and MRO services). The laboratory will test the secondary specimen for the presence of any detectable amount of controlled substances and not tested at the original cut-off levels.

If the result of the split specimen test fails to reconfirm the presence of the drug(s) or drug metabolite(s) found in the primary specimen, the MRO shall cancel the test and report the cancellation and the reasons for it to the Department of Transportation, the Company and the employee.

A.3.6.3 Medical Review Officer

The Company shall use a Medical Review Officer ("MRO") on all drug tests. On DOT tests, the MRO shall review and interpret each confirmed positive test result. The MRO will try to contact the employee testing positive and provide an opportunity to discuss and explain the result. If the MRO verifies a laboratory confirmed positive report, the MRO shall report the verified positive test result to the Company. The MRO shall only report test results to the Company's designated representative.

A.3.6.4 MRO Appointment

The Company will designate a medical review officer (MRO) by obtaining MRO services as part of its anti-drug program.

A.3.6.5 MRO Qualifications

The MRO must be a licensed physician with knowledge of drug abuse disorders.

A.3.6.6 MRO Duties

The MRO shall perform the following functions for the Company:

1. Review the results of drug testing before they are reported to the Company.
2. Review and interpret each confirmed positive or adulterated test result as follows to determine if there is an alternative medical explanation for the confirmed positive test result:
    a. Conduct a medical interview with the individual tested.
    b. Review the individual's medical history and any relevant biomedical factors.
    c. Review all medical records made available by the individual tested to determine if a confirmed positive test resulted from legally prescribed medication.
    d. If necessary, require that the original specimen be reanalyzed to determine the accuracy of the reported test result.
    e. Verify that the laboratory report and assessment are correct.
3. Determine whether and when an employee who refused to take or did not pass a drug test administered under DOT Procedures may be returned to duty.
4. Ensure that an employee has been drug tested in accordance with the DOT Procedures before the employee returns to duty.

A.3.6.7 MRO Determinations

The following rules govern MRO determinations:

1. If the MRO determines, after appropriate review, that there is a legitimate medical explanation for the confirmed positive test result other than the unauthorized use of a prohibited drug, the MRO is not required to take further action.
2. If the MRO determines, after appropriate review, that there is no legitimate medical explanation for the confirmed positive or adulterated test result other than the unauthorized use of a prohibited drug, the MRO shall refer the individual tested to a personnel or administrative officer for further proceedings in accordance with the Company's anti-drug program.
3. Based on a review of laboratory inspection reports, quality assurance and quality control data and other drug test results, the MRO may conclude that a particular drug test result is scientifically insufficient for further action. Under these circumstances, the MRO should conclude that the test is negative for the presence of a prohibited drug or drug metabolite in an individual's system.

A.3.6.8 Notification Regarding Testing Concerns

Employees shall immediately notify the Company when:

1. The Chain of Custody form contained any incorrect information.
2. The identification number placed on the specimen bottle differed from the identification number on the Chain of Custody form.
3. The collector did not seal the specimen with tamper-proof tape in the view of the employee.
4. The collector did not have the employee initial the tamper-proof seal or sign the Chain of Custody form.
5. The collector observed the actual specimen collection.

A.3.6.8 Notification Regarding Testing Concerns, Continued

6. There was any unusual occurrence during the collection process that the employee felt may jeopardize the credibility or accuracy of the test.
7. If the employee does not notify the Company about any of these situations within four hours of the testing, the Company will consider that the collection procedures were accurate and the employee did not have any concerns about the collection process.

A.3.7 Rehabilitation Assistance

1. The Company will support treatment efforts for employees with drug/alcohol problems who, prior to official discovery, voluntarily seek assistance.
2. When an employee, for the first time, voluntarily reports he or she has a drug/alcohol problem and seeks assistance, he or she will be granted a leave of absence in accordance with applicable employment policies or labor agreements. The employee will not be permitted to return to work until such time as a competent medical authority, approved by the Company, has certified the employee is free of the problem and able to safely perform the assignment.
3. To protect their position with the Company, the employee voluntarily seeking assistance must agree to an in-depth evaluation by an accredited Substance Abuse Professional, complete all recommended treatment, rehabilitation and follow-up testing as recommended by the Substance Abuse Professional.
4. The employee will be permitted job protection and rehabilitation only one time. Any subsequent involvement in a drug/alcohol or related incident following return to work will result in appropriate disciplinary action, up to and including termination.
5. The Company's financial participation in the rehabilitation will be limited to existing leave and medical benefits provided under the labor agreement or employment policies applicable to the employee at that time.

A.3.7.1 Hotline Numbers

To assist employees in obtaining early voluntary treatment, the Company encourages its employees who might need help to contact the Employee Assistance Program provider or any of the following Drug and Alcohol Consultation Numbers listed below.

American Council on Alcoholism Helpline:	1-800-527-5344
Alanon (Family Members):	1-800-356-9996
National Council on Alcoholism:	1-800-622-2255
National Institute on Drug Abuse Hotline:	1-800-662-4357
Cocaine Hotline:	1-800-262-2463
Narcotics Anonymous (WA State):	(206) 329-1618
The Washington State Substance Abuse Coalition (WSSAC):	1-800-662-9111

A.3.8 Duties and Responsibilities

A.3.8.1 Supervisory Responsibility

Supervisors of the Company are responsible:

1. To report any alleged or suspected illegal drug or alcohol related activity that may be in violation of this policy to their manager. This specifically includes the discovery of suspected illegal drugs, paraphernalia or alcoholic beverages or empty bottles found on Company premises.
2. To report to their manager any suspicions that an employee may be impaired by illegal drugs or alcohol or in violation of this policy. If any employee shows signs of illegal drug use or alcohol misuse (odors of alcohol beverages or illegal drugs, acute indicators, or other physical impairment) the supervisor shall remove the employee from duty and contact his or her manager.

A.3.8.1 Supervisory Responsibility, Continued

3. To ensure testing as described in this policy is conducted after an accident.
4. To notify the local law enforcement agency if any employee, who by his or her physical indicators, behavior or actions, is ordered to take a drug or alcohol test, refuses and then attempts to leave the Company property while operating a vehicle.
5. Arrange for transportation to the employee's home for any employee appearing to be impaired by illegal drugs or alcohol at work. This specifically includes any employee who is requested to take a reasonable cause drug or alcohol test.

A.3.8.2 Employee Responsibility

Employees are responsible to:

1. Report to work at all times free of alcohol or other illegal drugs and their effects.
2. Participate in Company-sponsored drug and alcohol education programs.
3. Seek and accept assistance for alcohol and other drug abuse related problems before job performance is affected or the Company becomes aware of the problem through means other than self admission.
4. Notify his or her supervisor or other Company manager regarding any contraband he or she may find on any Company property, vehicle, vessel, work station, or common areas of Company premises.
5. Notify his or her supervisor if they find any suspected illegal drugs, alcohol, or paraphernalia on Company property, vessels, vehicles, barges, or any other asset owned by the Company.
6. Ensure that their use of prescription and over-the-counter medicine does not adversely affect their ability to work in a safe and efficient manner.
7. Inform a Company official of any criminal drug related arrest or conviction he or she may suffer no later than five (5) days after such incident.

A.3.9 Education and Training

A.3.9.1 Supervisor Education Program

Supervisory personnel shall attend training as presented by the Company. This training will include at least the following information:

1. The effects and consequences of drug and alcohol use on personal health, safety and work environment.
2. The manifestations and behavioral cues that may indicate drug and alcohol use and abuse.
3. Methods of dealing with reasonable cause testing situations and troubled employees.

A.3.10 Definitions

"Accident - Company definition" means any occurrence that causes an injury requiring professional medical attention; or, substantial loss or damage to property or equipment, as determined by Company management; or flagrant violation of Company policy of failure to follow prudent operating methods; or, a significant discharge of a reportable substance, as determined by Company management.

"Alcohol" means the intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols including methyl or isopropyl alcohol.

"Alcohol concentration" means either grams of alcohol per 100 milliliters of blood, or grams of alcohol per 210 liters of breath.

"Alcohol use" means the consumption of any beverage, mixture or preparation, including any medication, containing alcohol.

A.3.10 Definitions, Continued

"Chemical test" means a scientifically recognized test which analyzes an individual's breath, blood, urine, saliva, bodily fluids, or tissues for evidence of dangerous drugs or alcohol use.

"Company" means Tidewater Barge Lines, Inc. and Tidewater Terminal Company, its subsidiaries, affiliates and joint ventures.

"Company Premises" means any location owned, operated by, leased by, or controlled by the Company or any location or job site where Company business is conducted.

"Confirmation (or confirmatory) test" means a second analytical procedure to identify the presence of a specific drug or metabolite that is independent of the screening test and that uses a different technique and chemical principle from that of the screening test in order to ensure reliability and accuracy.

"Controlled substances" means any drug or drug-like substance whose sale, use or possession is unlawful by federal, state or local laws.

"Dangerous drug" means a narcotic drug, controlled substance and marijuana.

"Dangerous drug level" means the amount of traces of dangerous drugs or drug metabolites in an individual's breath, blood, urine, saliva, or body fluids or tissues.

"Drug" means any substance (other than alcohol) that has known mind or function-altering effects on a person, specifically including any psychoactive substance and including, but not limited to, controlled substances.

"Drug test" means a chemical test of an individual's urine for evidence of dangerous drug use.

"Drugs unlawfully used" means any illegal drug(s), any prescription medication(s) used in any way other than strictly as prescribed.

"Failing a test for controlled substance(s) - Company testing" means a test result that is reported by the laboratory as positive for the presence of drug(s) or drug metabolites in an employee's system.

"Fails a chemical test for dangerous drugs - DOT/USCG/RSPA" means that the test result is reported as positive for the presence of dangerous drugs or drug metabolites in an individual's system after a MRO's review.

"Impairment or under any influence" is defined as the following means that the employee was under any influence of any substance (alcohol or drugs) where his or her motor senses (i.e., sight, hearing, balance, reflexes, etc.), judgment, mood, behavior, actions, reactions, pain threshold or thinking process are, or may be affected; or, the presence of detectable levels of controlled substance(s) or drugs unlawfully used, or their metabolite(s), or the presence of alcohol in an employee's body (blood, urine, or breath); or, the odor of any controlled substance(s) or alcohol on the employee's person or breath.

"Intoxicant" means any form of alcohol, drug or combination thereof.

"Law enforcement officer" means a Coast Guard commissioned, warrant, or petty officer; or any other law enforcement officer authorized to obtain a chemical test under Federal, State, or local law.

"Marine employer" means the owner, managing operator, charterer, agent, master, or person in charge of a vessel other than a recreational vessel.

A.3.10 Definitions, Continued

"Medical Review Officer (MRO)" means a licensed physician (medical doctor or doctor of osteopathy) responsible for receiving laboratory results generated by the Company's drug testing program who has knowledge of substance abuse disorders and has appropriate medical training to interpret and evaluate an individual's confirmed positive test result together with his or her medical history and any other relevant biomedical information.

"Post-incident testing" means a drug test administered following any accident, incident, or serious marine incident.

"Pre-placement controlled substance or drug test" means a test for the use of illegal controlled substances given to an applicant after he or she has been offered a position with the Company.

"Random testing" means unannounced controlled substance and alcohol testing given to a predetermined percentage of employees. Selection is accomplished by using a statistically sound random selection process from the pool of eligible employees. Every member of that given population has an equal chance of being selected throughout his or her employment.

"Reasonable suspicion testing" means a controlled substance or alcohol test given to an employee who is reasonably suspected of using illegal drugs or alcohol, based on physical, attitudinal, behavioral, attendance, or performance indicators.

"Refusal to take a test" means all of the following are considered a refusal to take a test: (1) not signing Company, laboratory, or collection site forms as requested; (2) not providing information to the Company or collection site personnel as requested; (3) not successfully completing the testing process to the point the Company receives an acceptable test result.

"Return to duty testing" means a controlled substance or alcohol test conducted before any employee returns to duty after rehabilitation or treatment for drug or alcohol abuse and additional unannounced drug tests given to employees following completion of rehabilitation or treatment for drug or alcohol abuse. Return to duty testing also means testing of an employee prior to returning to work after an extended absence of forty-five days or more.

"Split Specimen" means a Department of Transportation initiated and authorized test for controlled substance(s), whereas, a single specimen will be split into two samples. If the test result of the primary specimen is positive, the employee may request that the MRO direct that the split specimen be tested in a different Company authorized DHHS-certified laboratory.

"Supervisor" means any employee who has the authority to hire, direct, assign, dispatch, layoff, recall, suspend, discipline or fire other employees, or to effectively recommend such action.

"Vessel" includes every description of water craft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

A.3.11 United States Coast Guard Regulated Personnel

The Company is mandated by Department of Transportation United States Coast Guard regulations to conduct drug and alcohol testing on crewmembers and tankermen who work on board Company vessels and barges. In addition to the conditions described in the Company policy, all crewmembers are subject to the testing and conditions described in this appendix.

A.3.11.1 Prohibitions

While on board a vessel, crewmembers:

1. Shall not perform or attempt to perform any scheduled duties within four hours of consuming any alcohol;
2. Shall not be intoxicated at any time;
3. Shall not consume any intoxicant while on watch or duty.
4. When subject to alcohol testing after a "Serious Marine Incident" shall not consume alcohol beverages for 8 hours following the occurrence of the "Serious Marine Incident" or until after the alcohol testing for the incident is completed.

A.3.11.2 Drug Tests to be Administered

The Company will conduct the following drug tests for the presence of a prohibited drug:

A.3.11.3 Pre-Employment Testing

The Company will not employ, or otherwise give a commitment of employment to, any individual to serve as a crewmember unless the individual passes a chemical test for dangerous drugs.

A.3.11.4 Pre-Employment Background Checks

Tidewater Barge Lines, Inc. will require new hires and other employees beginning safety-sensitive duties who are regulated by the Department of Transportation drug and alcohol testing regulations to provide written authorization permitting the Company to check their past drug and alcohol testing background.

The applicants must provide written consent for this to occur. The applicant will not be considered for employment if they refuse to provide this consent.

The Company will not let the employee perform safety-sensitive duties for more than 30 days unless the Company has obtained, or made and documented a good faith effort to obtain, the required information from previous employers (as well as from firms to whom the employee applied for safety-sensitive work, where there was a positive test result or a refusal).

If the Company finds that the employee has a violation on his or her record and the employee has not successfully completed the return-to-duty process, the Company will stop using the employee to perform safety-sensitive functions and the employee will face disciplinary action up to and including termination.

If the Company finds that the employee has a violation on his or her record and the employee has not successfully completed the return-to-duty process, the Company will stop using the employee to perform safety-sensitive functions and the employee will face disciplinary action up to and including termination.

A.3.11.5 Serious Marine Incident Testing

Serious marine incidents are events that result in:

1. One or more deaths;
2. Injuries requiring professional medical treatment beyond first aid, and, in the case of a crewmember, leaves the crewmember unable to perform his or her routine vessel duties;
3. Damages more than $100,000;
4. Total loss of a vessel of more than 100 gross tons;
5. Discharge of 10,000 gallons of oil; or
6. Discharge of any hazardous substance.

A.3.11.5 Serious Marine Incident Testing, Continued

All crewmembers and employees who are directly or indirectly involved in any serious marine incident, or any occurrence that is likely to become a serious marine incident are subject to drug and alcohol testing.

The Company considers an employee involved in an incident if his or her order, action or failure to act may be a causative factor, or cannot be ruled out as a causative factor in that incident.

The Captain, Pilot, or other designated company representative shall attend indoctrination and training in handling drug and alcohol testing after a serious marine incident.

Alcohol and urine specimen collection for drug testing must occur as soon as practical following the incident but not exceed the following time limits:

- Alcohol testing of each individual must be conducted within 2 hours of when the SMI occurred, unless precluded by safety concerns directly related to the incident.
- If safety concerns directly related to the SMI prevent the alcohol testing from being conducted within 2 hours of the occurrence of the incident, then alcohol testing must be completed as soon as the safety concerns are addressed.
- Alcohol testing is not required to be conducted more than 8 hours after the occurrence of the SMI.
- If the alcohol testing is not conducted, the Company must document on form CG–2692B the reason why the testing was not conducted.
- Drug-test specimens of each individual must be conducted within 32 hours of when the SMI occurred, unless precluded by safety concerns directly related to the incident.
- If safety concerns directly related to the SMI prevent the collection of drug-test specimens from being conducted within 32 hours of the occurrence of the incident, then the collection of drug-test specimens must be conducted as soon as the safety concerns are addressed.
- If the drug-test specimens are not collected, the marine employer must document on form CG–2692B the reason why the specimens were not collected.

A.3.11.6 Vessel Officers Responsibilities - "Serious Marine Incident"

The Captain, Pilot, or other company representative is responsible for ensuring that all elements of the serious marine incident testing are completed. In the absence or incapacitation of the Captain, the Pilot or other specified officer shall assume the responsibilities of the Captain pertaining to this drug and alcohol testing program.

1. Secure the safety of the vessel and its crew.
2. Provide necessary first aid to injured crewmembers and stabilize the vessel's situation.
3. Determine if the incident is or can become a "serious marine incident".
4. Determine which vessel personnel may have been involved in the incident and should be tested.
5. The Captain will ensure that all persons directly involved in a serious marine incident provide urine specimens and breath or blood specimens, as soon as practical following the incident.
6. If possible, take all persons needing drug and alcohol tests to the nearest specimen collection and breath testing site.
7. If blood samples are required from any employee, only a qualified medical officer will take or handle the samples and only under safe and proper conditions.
8. If a site is unavailable:
    a. Read the alcohol testing equipment instructions. Have a vessel officer witness the testing. Conduct the alcohol tests according to the manufacturer's instructions for the equipment you are using and document the results. Confirm all positive test results by documenting the indicators of alcohol use and by questioning the individual about his/her drinking.
    b. Secure and prepare a urine specimen collection site.
    c. Collect urine specimens from all persons involved in the incident.
    d. Review chain of custody forms and make sure all information is complete and correct.

A.3.11.6 Vessel Officers Responsibilities-"Serious Marine Incident", Continued

e. Store or transport specimens. If specimens cannot be immediately shipped, specimens should be placed in a secure refrigerator. No other persons should have access to the specimens during storage. You can use a locked box to secure the specimens in common storage areas. Specimens can be shipped by way of commercial parcel carrier.
f. Distribute the appropriate copies of the "chain of custody" forms to the designated recipients: (1) copies to the laboratory with specimen, (1) copy to Medical Review Officer, (1) copy to employer, (1) copy to employee and (1) to remain at collection site.

9. As soon as possible, complete USCG forms CG-2692 and 2692B and mail the form to the person in charge of safety and accident investigation. They will forward these to the nearest Coast Guard Marine Safety or Marine Inspection Office or Company office, depending on company policy.

Upon receipt of the chemical test results, the Company shall submit a copy of the test results for each person listed on the CG-2692 to the Coast Guard Officer in Charge, Marine Inspection to whom the CG-2692 was submitted. All persons whose results indicate the presence of illegal drugs should be removed from service.

Each vessel should have urine specimen collection and shipping kits readily available in the event of a serious marine incident.

A.3.11.7 Crew Responsibilities after a "Serious Marine Incident"

Crewmembers are responsible for providing necessary specimens as requested by the vessel officer(s) or any law enforcement official. The crew's primary responsibility shall be the safety of the vessel and persons on board. Nothing in this plan will change or interfere with the responsibilities of the officers and crew toward the vessel and fellow crew members. Testing requirements will not prevent vessel personnel from performing duties necessary for the preservation of life or property or the protection of the environment.

A.3.11.8 Random Drug Testing

All crewmembers and tankermen will be subject to random drug testing. The random selection of individual crewmembers and tankermen means that every member of a given population has a substantially equal chance of selection on a statistically valid basis. The testing frequency and selection process shall be such that an employee's chance of selection continues to exist throughout his or her employment. Random selection may be accomplished by periodically selecting one or more vessels and testing all or specified crewmembers.

Crewmembers and tankermen will be tested on a random basis at an annual rate equal to or greater than that established by USCG regulations.

A.3.11.9 Reasonable Cause Testing

A crewmember is subject to testing when there is suspicion that the crewmember has used a dangerous drug or is impaired by alcohol.

The test must be based on a reasonable and articulable belief that the individual has used a dangerous drug or alcohol based on direct observation of specific, contemporaneous physical, behavioral, or performance indicators of probable use. Where practical, this belief should be based on the observation of the individual by two persons in supervisory positions.

If an individual refuses to provide a urine or breath specimen when directed to do so by the Company under the provisions of this section, this fact shall be entered in the vessel's official log book, if one is required.

A.3.11.10 Periodic Testing

Coast Guard regulations require that all persons acting under the authority of a license, or certificate of registry or merchant mariner's document be tested for the illegal use of drugs, as part of any physical examination needed to maintain his or her license.

It is the responsibility of the individual employee to comply with the USCG periodic testing requirements.

A.3.11.11 Directly Observed Specimen Collection

Employees shall submit to directly observed specimen collections under the following situations:

- The laboratory reported to the MRO that a specimen is invalid and the MRO reported to you that there was not an adequate medical explanation for the result.
- The MRO reported to you that the original positive, adulterated, or substituted test result had to be cancelled because the test of the split specimen could not be performed.
- During a previous test and adulterant was discovered or the specimen could not be tested due to the presence of an unidentifiable substance in the specimen.
- Invalid specimen and the MRO reports that there was not an adequate medical explanation for the result and the split specimen test could not be performed (e.g., split lost, inadequate volume).
- The Company may direct an observed collection if the test is a return-to-duty or follow-up test.
- The collector observes materials brought to the collection site or the employee's conduct clearly indicated an attempt to tamper with a specimen.
- The temperature on the original specimen was out of range or the specimen appeared to have been tampered with.

In all cases, any directly observed specimen collection will be conducted with the use of a same-gender direct observer. Refusing to submit to a directly observed specimen collection when any of the above situations exist will result in disciplinary action, up to and including termination.

A.3.11.12 Refusal to Submit to Testing

Refusal to submit to testing may result in immediate termination and removal from service. If the employee refusing to test cannot be immediately removed from the vessel, he or she shall not be allowed to work on deck or perform duties directly affecting the safe operation of the vessel. The Captain shall be responsible for ensuring compliance with this order.

A.3.11.13 Testing Positive

The Company will remove from its vessels, as soon as practical, any employee who receives a positive test result. If the employee testing positive cannot be immediately removed from the vessel, he or she shall not be allowed to work on deck or perform duties directly affecting the safe operation of the vessel.

In general, the first occasion a vessel crewmember tests positive for illegal drugs or alcohol:

- They will be removed from the vessel as soon as possible.
- The crewmember will face immediate termination.
- The crewmember that must be removed from their vessel due to a positive test for illegal drugs will be responsible for ALL COSTS associated with their replacement.
- The Company will notify the USCG about positive tests for illegal drugs and through USCG actions the crewmember may experience revocation or suspension of any possessed USCG license or document.

A.3.11.14 Submission Of Violations to USCG

The Company will notify the nearest Coast Guard Officer in Charge of Marine Investigation of all persons who hold a merchant mariner document or a license issued by the USCG and experiences any of the following:

- A positive test for dangerous drugs.
- A refusal to take a mandated drug or alcohol test.
- An adulterated or substituted drug test result.
- Other violations of the USCG drug or alcohol use regulations.

Personnel holding licenses, documents or Merchant Mariners Documents (MMD's) should note that they are subject to USCG suspension and revocation proceedings with respect to his or her MMD or license.

A.3.11.15 Returning to Work Following a Positive Test Result or a Violation of DOT Drug or Alcohol Rules

a. Arrange for and complete a face-to-face clinical assessment and evaluation from a Company authorized Substance Abuse Professional to determine what assistance is needed by the employee to resolve problems associated with alcohol and/or drug use.
b. Complete all education and/or treatment program(s) that is recommended by the Substance Abuse Professional.
c. Arrange for and complete a face-to-face follow-up evaluation from the initial Substance Abuse Professional to determine if the employee has actively participated in the education and/or treatment program and has demonstrated successful compliance with the initial assessment and evaluation recommendations.
d. Provide the Company's Designated Employer Representative with all documents showing evidence that the above steps are completed. In addition, provide written authorization for the release of confidential information and permit the Company Designated Employer Representative to discuss the employee's situation with the Substance Abuse Professional and any education and treatment facilities the employee has used to complete the return to work process.
e. Obtain a letter from the Medical Review Officer stating that the employee is now drug free and poses little or no risk of future drug use, before such employee may return to work on board a vessel of this Company.
f. Submit to follow-up drug and/or alcohol testing as directed by the Substance Abuse Professional, Medical Review Officer and Company Designated Employer Representative.

A.3.11.16 Supervisor Education Program

All vessel officers and licensed personnel shall attend at least sixty (60) minutes or more of training. This training will include at least the following information:

1. The effects and consequences of drug and alcohol use on personal health, safety and work environment.
2. The manifestations and behavioral cues that may indicate drug and alcohol use and abuse.
3. Methods of dealing with reasonable cause testing situations and troubled employees.
4. Indoctrination on the regulations and the post serious marine incident testing requirements.

Attendance at such supervisory training sessions shall be mandatory and documented. A record shall be maintained in the Company offices.

A.3.11.17 Employee Drug and Alcohol Education Program

The Company requires each employee serving as a crew member in any capacity on board any Company vessel to attend scheduled education sessions. The employee education will include at least the following:

1. The effects and consequences of drug and alcohol use on personal health, safety and work environment;
2. The manifestations and behavioral cues that may indicate drug and alcohol use and abuse.
3. The presentation and discussion of the Company's anti drug and alcohol policy.

A.3.11.18 Definitions

Chemical test - a scientifically recognized test which analyzes an individual's breath, blood, urine, saliva, bodily fluids, or tissues for evidence of dangerous drug or alcohol use.

Crewmember - an individual who is:

1. On board a vessel acting under the authority of a license, certificate of registry, or merchant mariner's document, whether or not the individual is a member of the vessel's crew; or
2. Engaged or employed on board a vessel owned in the United States that is required by law or regulation to engage, employ, or be operated by an individual holding a license, certificate of registry, or merchant mariner's document.

Dangerous drug - a narcotic drug, a controlled substance, or a controlled-substance analog (as defined in section 102 of the Comprehensive Drug Abuse and Control Act of 1970 (21 U.S.C. 802)).

Dangerous drug level - the amount of traces of dangerous drugs or drug metabolites in an individual's breath, blood, urine, saliva, or body fluids or tissues.

Drug test - a chemical test of an individual's urine for evidence of dangerous drug use.

Employer - a marine employer or sponsoring organization.

Fails a chemical test for dangerous drugs - that the result of a chemical test conducted in accordance with 49 CFR part 40 is reported as "positive" for the presence of dangerous drugs or drug metabolites in an individual's system by a Medical Review Officer in accordance with that part.

Intoxicant - any form of alcohol, dangerous drug, or combination thereof.

Marine employer - the owner, managing operator, charterer, agent, master, or person in charge of a vessel, other than a recreational vessel.

Medical Review Officer - an individual designated by the employer to carry out the duties specified in drug and alcohol testing regulations.

Operation - to navigate, steer, direct, manage, or sail a vessel, or to control, monitor, or maintain the vessel's main or auxiliary equipment or systems. Operation includes:

1. Determining the vessel's position, piloting, directing the vessel along a desired trackline, keeping account of the vessel's progress through the water, ordering or executing changes in course, rudder position, or speed and maintaining a lookout;
2. Controlling, operating, monitoring, maintaining, or testing: the vessel's propulsion and steering systems; electric power generators; bilge, ballast, fire and cargo pumps; deck machinery including winches, windlasses and lifting equipment; lifesaving equipment and appliances; firefighting systems and equipment; and navigation and communication equipment;

A.3.11.18 Definitions, Continued

3. Mooring, anchoring and line handling; loading or discharging of cargo or fuel; assembling or disassembling of tows; and maintaining the vessel's stability and watertight integrity.

Passes a chemical test for dangerous drugs - the result of a chemical test conducted in accordance with 49 CFR part 40 is reported as "negative" by a Medical Review Officer in accordance with that part.

Refusal to submit to testing - The following constitute a refusal to take a test:

1. The employee or applicant fails to appear for any test within a reasonable time, as determined by the Company, after being directed to do so by a supervisor employer.
2. The employee fails to remain at the testing site until the testing process is complete.
3. A DOT regulated employee fails to provide a urine specimen for any drug test required by their respective DOT agency regulations.
4. In the case of a directly observed or monitored collection in a drug test, the employee fails to permit the observation or monitoring of your provision of a specimen.
5. The employee fails to provide a sufficient amount of urine when directed and it has been determined, through a required medical evaluation, that there was no adequate medical explanation for the failure.
6. The employee fails or declines to take a second test that the Company or collector has directed you to take.
7. The employee fails to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process, or as directed by the DER as part of the "shy bladder" procedures.
8. The employee fails to cooperate with any part of the testing process (e.g., refuse to empty pockets when so directed by the collector, behave in a confrontational way that disrupts the collection process).

Serious marine incident - an event defined in 46 CFR 4.03-2.

A.3.12 Research and Special Programs Administration Covered Employees

The Company is mandated by RSPA to conduct drug testing on pipeline facilities covered by RSPA regulations. In addition to the conditions described in the Company policy, all persons at these facilities are subjected to the testing and conditions described in this appendix. This is an abbreviated form of the Company's RSPA anti-drug and alcohol misuse plan. The full version is available for viewing from the covered facility's manager.

A.3.12.1 Drug Tests to be Administered

The Company will conduct the following drug tests for the presence of a prohibited drug:

A.3.12.2 Pre-Employment Testing

A pre-employment drug test must be conducted before an individual is hired or contracted and when an individual is transferred/promoted from a non covered to a covered position. This also applies to employees returning from a leave of absence who have not been participating in the anti drug plan and subject to the random selection process.

A negative test result is required prior to performing covered functions.

A.3.12.3 Pre-Employment Background Checks

Tidewater Barge Lines, Inc., will require new hires and other employees beginning safety-sensitive duties who are regulated by the Department of Transportation drug and alcohol testing regulations to provide written authorization permitting the Company to check their past drug and alcohol testing background.

A.3.12.3 Pre-Employment Background Checks, Continued

The applicants must provide written consent for this to occur. The applicant will not be considered for employment if they refuse to provide this consent.

The Company will not let the employee perform safety-sensitive duties for more than 30 days unless the Company has obtained, or made and documented a good faith effort to obtain, the required information from previous employers (as well as from firms to whom the employee applied for safety-sensitive work, where there was a positive test result or a refusal).

If the Company finds that the employee has a violation on his or her record and the employee has not successfully completed the return-to-duty process, the Company will stop using the employee to perform safety-sensitive functions and the employee will face disciplinary action, up to and including termination.

In addition to seeking information from previous employers, the Company will also ask the prospective employees if they have failed or refused a DOT drug or alcohol pre-employment test within the past two years from an employer who did not hire them. If the prospective employee admits to failing test or refusing a DOT drug or alcohol test, the Company will require that the prospective employee provide proof of compliance with all return to work requirements as set forth by DOT regulations. This will include providing the Company copies of all documents that show complete and full compliance with the return to work regulations.

A.3.12.4 Post-Accident Testing

The company shall promptly determine if the employee's performance contributed to the "accident" or cannot be completely discounted as a contributing factor to the accident. Each of these employees shall be drug tested as soon as possible but no later than 32 hours after the accident. The company must take all reasonable steps to obtain a urine specimen from an employee after an accident, as defined above, but any injury should be treated first. The following steps will be used to guide the supervisor to a satisfactory outcome in a post-accident situation.

A.3.12.5 Random Testing

The primary purposes of random testing are to deter prohibited drug use and to ensure a drug free workforce. DOT regulations require that covered employees shall be subject to drug testing on an unannounced and random basis.

The company shall conduct a number of tests equal to at least twenty-five percent of all covered employees each calendar year, spread reasonably over a twelve-month period. The company will conduct random selection and testing on a quarterly schedule.

The following is a discussion of the key aspects of the random testing selection process.

1. Employees remain in the random selection pool at all times, regardless of whether or not they have been previously selected for testing.
2. Employees shall be selected for testing by using a computer-based random number generator or equivalent random selection method that is matched with an employee's social security number or employee ID number.
3. The process will be unannounced as well as random. Employees will be notified that they have been selected for testing after they have reported for duty on the day of collection.
4. Employees will be selected for random testing based on the number of covered employees at the time and the necessary testing rate.
5. Specimen collection will be conducted on different days of the week throughout the annual cycle to prevent employees from matching their drug use patterns to the schedule for collection.

A.3.12.6 Reasonable Cause Testing

The Company will drug test each employee when there is reasonable cause to believe the employee is using a prohibited drug. The decision to test must be based on a reasonable and articulable belief that the employee is using a prohibited drug on the basis of specific, contemporaneous physical, behavioral, or performance indicators of probable drug use.

Because the Company has fewer than fifty employees subject to testing under 49 CFR Part 199 only one supervisor, trained in detecting possible drug use symptoms, needs to substantiate the decision to conduct reasonable cause testing. If possible the supervisor will attempt to contact his or her manager, the Human Resources manager, or the safety manager to verify their suspicions warrant testing. This verification can be accomplished in person, by phone, or by discussions a few hours later.

A.3.12.7 Return to Duty Testing

An employee who refuses to take or does not pass a drug test may not return to duty until the employee passes a drug test administered under 49 CFR Part 199 and the medical review officer has determined that the employee may return to duty.

An employee who returns to duty shall be subject to a reasonable program of follow-up drug testing without prior notice for not more than sixty months after his or her return to duty.

A.3.12.8 Removal from Covered Function

The Company will not permit any covered employee to perform covered functions if the employee has engaged in conduct prohibited by the plan or an anti-drug rule of another DOT agency.

A.3.12.9 Use of Persons Who Fail or Refuse a Drug Test

The Company will not knowingly use as an employee any person who -

- Fails a drug test required by this plan and the medical review officer makes a determination of a verified positive drug test; or
- Refuses to take a drug test required by this plan.

A.3.12.10 Employee Assistance Program

The Company will provide an employee assistance program (EAP) for its employees and supervisory personnel who will determine whether an employee must be drug tested based on reasonable cause. The Company may establish the EAP as a part of its internal personnel services or the Company may contract with an entity that provides EAP services.

Each EAP must include education and training on drug use. At the discretion of the Company, the EAP may include an opportunity for employee rehabilitation.

Education under each EAP must include at least the following elements:

1. Display and distribution of informational material;
2. Display and distribution of a community service hot-line telephone number for employee assistance; and
3. Display and distribution of the employer's policy regarding the use of prohibited drugs.

A.3.12.11 Alcohol Prohibitions

In relation to alcohol, covered employees are prohibited from the following conduct:

1. Employees shall not report for duty or remain on duty requiring the performance of covered functions while having an alcohol concentration of 0.04 or greater.
2. Employees shall not use alcohol while performing covered functions.
3. Employees shall not use alcohol within four hours prior to performing covered functions, or, if an employee is called to duty to respond to an emergency, within the time period after the employee has been notified to report for duty.
4. Employees who have actual knowledge of an accident in which his or her performance has not been discounted by the Company as a contributing factor to the accident shall not use alcohol for eight hours following the accident, unless he or she has been given a post-accident test for alcohol, or the Company has determined that the employee's performance could not have contributed to the accident.

A.3.12.12 Knowledge of Prohibited Alcohol Related Conduct

If the Company has actual knowledge that an employee is in violation of the prohibited alcohol related conduct, the Company will remove that employee from all covered functions. The manager in charge of the employee will make diligent efforts to have the employee tested according to this plan. Further, the manager will ensure that the employee is safely transported to a place of residence or another suitable location.

A.3.12.13 Refusal to Submit to a Required Alcohol Test

Employees shall not refuse to take any required test. Any employee who refuses to submit to such a test shall be immediately removed from performing any covered function. **Under Company policy the employee shall be subject to disciplinary action, up to and including termination.**

A.3.12.14 Alcohol Tests

Under this plan, the Company will conduct the following types of alcohol tests for the presence of alcohol:

A.3.12.15 Post-Accident

As soon as practicable following an accident, the Company will test each surviving covered employee for alcohol if that employee's performance of a covered function either contributed to the accident or cannot be completely discounted as a contributing factor to the accident. The decision not to administer a test shall be based on the Company's determination, using the best available information at the time of the determination, that the covered employee's performance could not have contributed to the accident.

If a post-accident test is not administered within 2 hours following the accident, the Company manager in charge of the facility shall prepare and maintain on file a record stating the reasons the test was not promptly administered. If a required post-accident test is not administered within 8 hours following the accident, the manager shall cease attempts to administer an alcohol test and shall state in the record the reasons for not administering the test.

Covered employees who are subject to post-accident testing shall remain readily available for such testing, including notifying the Company's facility manager of his/her location if he/she leaves the scene of the accident prior to submission to such test. If a covered employee does not remain available for testing, or leaves the site without manager approval, the Company may consider that a refusal to submit to testing. Nothing in this plan is intended to delay medical attention for injured people following an accident or to prohibit a covered employee from leaving the scene of an accident for the period necessary to obtain assistance in responding to the accident or to obtain necessary emergency medical care.

A.3.12.16 Reasonable Suspicion Testing

Covered employees are required to submit to alcohol testing when the Company has reasonable suspicion to believe that the employee has violated the prohibitions in this plan.

The Company's determination that reasonable suspicion exists to require the covered employee to undergo an alcohol test shall be based on specific, contemporaneous, articulable observations concerning the appearance, behavior, speech, or body odors of the employee. The required observations shall be made by a supervisor who is trained in detecting the symptoms of alcohol misuse. The supervisor who makes the determination that reasonable suspicion exists shall not conduct the breath alcohol test on that employee.

Alcohol testing under this plan is only authorized if the observations are made during, just preceding, or just after the period of the work day that the employee is required to comply with this plan. A covered employee may be directed by the Company to undergo reasonable suspicion testing for alcohol only while the employee is performing covered functions; just before the employee is to perform covered functions; or just after the employee has ceased performing covered functions.

If a reasonable suspicion test is not administered within 2 hours the Company manager or supervisor requesting the test shall prepare and maintain on file a record stating the reasons the test was not promptly administered. If the test is not administered within 8 hours the Company manager/supervisor shall cease attempts to administer an alcohol test and shall state in the record the reasons for not administering the test. These records shall be submitted to RSPA upon request of the Administrator.

Notwithstanding the absence of a reasonable suspicion alcohol test the Company will not permit a covered employee to report for duty or remain on duty while the employee is under the influence of or impaired by alcohol, as shown by the behavioral, speech, or performance indicators of alcohol misuse, nor shall the Company permit the covered employee to perform or continue to perform covered functions, until:

- An alcohol test is administered and the employee's alcohol concentration measures less than 0.02; or
- The start of the employee's next regularly scheduled duty period, but not less than 8 hours following the determination that there is reasonable suspicion to believe that the employee has violated the prohibitions in this plan.

The Company shall not take any action under 49 CFR Part 199 against a covered employee based solely on the employee's behavior and appearance in the absence of an alcohol test. **However, under company policy, employees exhibiting behavior and appearance showing them to be under the influence of alcohol shall be subject to disciplinary action, up to and including termination.**

A.3.12.17 Return-to-Duty Testing

The Company shall ensure that before a covered employee returns to duty requiring the performance of a covered function after engaging in conduct prohibited by this plan, the employee shall undergo a return-to-duty alcohol test with a result indicating an alcohol concentration of less than 0.02.

A.3.12.18 Follow-Up Testing

Following a determination that a covered employee is in need of assistance in resolving problems associated with alcohol misuse, the Company shall ensure that the employee is subject to unannounced follow-up alcohol testing as directed by a substance abuse professional in accordance with the provisions of 49 CFR Section 199.243(b)(2)(ii).

Follow-up testing shall be conducted when the covered employee is performing covered functions; just before the employee is to perform covered functions; or just after the employee has ceased performing such functions.

A.3.12.19 Retesting of Covered Employees with an Alcohol Concentration of 0.02 or Greater but Less Than 0.04

The Company shall retest a covered employee to ensure compliance with the provisions of 49 CFR Section 199.237, if the Company chooses to permit the employee to perform a covered function within 8 hours following the administration of an alcohol test indicating an alcohol concentration of 0.02 or greater but less than 0.04.

A.3.12.20 Removal from Covered Function

The Company will not permit any covered employee to perform covered functions if the employee has engaged in conduct prohibited by the plan or an alcohol misuse rule of another DOT agency.

A.3.12.21 Other Alcohol-Related Conduct

The Company shall permit a covered employee tested under this plan, who is found to have an alcohol concentration of 0.02 or greater but less than 0.04, to perform or continue to perform covered functions, until:

1. The employee's alcohol concentration measures less than 0.02; or
2. The start of the employee's next regularly scheduled duty period, but not less than eight hours following administration of the test.

Under 49 CFR Part 199 the Company will not impose any action against an employee based solely on test results showing an alcohol concentration less than 0.04. **However, based on Company policy, an employee who must be removed from duty as a result of being under the influence of alcohol, will be subject to disciplinary action, up to and including termination.**

A.3.12.22 Refusal to Submit to Testing

Refusal to submit to any testing is a violation of the Company drug and alcohol policy and will result in removal from service, when practical and disciplinary action, up to and including termination. The following constitute a refusal to take a test:

1. The employee or applicant fails to appear for any test within a reasonable time, as determined by the Company, after being directed to do so by a supervisor, manager, or agent of the company.
2. The employee fails to remain at the testing site until the testing process is complete.
3. A DOT regulated employee fails to provide a urine specimen for any drug test required by their respective DOT agency regulations.
4. In the case of a directly observed or monitored collection in a drug test, the employee fails to permit the observation or monitoring of your provision of a specimen.
5. The employee fails to provide a sufficient amount of urine when directed and it has been determined, through a required medical evaluation, that there was no adequate medical explanation for the failure.
6. The employee fails or declines to take a second test that the Company or collector has directed you to take.
7. The employee fails to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process, or as directed by the DER as part of the "shy bladder" procedures.
8. The employee fails to cooperate with any part of the testing process (e.g., refuse to empty pockets when so directed by the collector, behave in a confrontational way that disrupts the collection process).

A.3.12.23 Directly Observed Specimen Collection

Employees shall submit to directly observed specimen collections under the following situations:

- The laboratory reported to the MRO that a specimen is invalid and the MRO reported to you that there was not an adequate medical explanation for the result.
- The MRO reported to you that the original positive, adulterated, or substituted test result had to be cancelled because the test of the split specimen could not be performed.
- During a previous test an adulterant was discovered or the specimen could not be tested due to the presence of an unidentifiable substance in the specimen.
- Invalid specimen and the MRO reports that there was not an adequate medical explanation for the result and the split specimen test could not be performed (e.g., split lost, inadequate volume).
- The Company may direct an observed collection if the test is a return-to-duty or follow-up test.
- The collector observes materials brought to the collection site or the employee's conduct clearly indicated an attempt to tamper with a specimen.
- The temperature on the original specimen was out of range or the specimen appeared to have been tampered with.

In all cases, any directly observed specimen collection will be conducted with the use of a same-gender direct observer. Refusing to submit to a directly observed specimen collection when any of the above situations exist will result in disciplinary action, up to and including termination.

A.3.12.24 Returning to Work Following a Positive Test Result or a Violation of DOT Drug or Alcohol Rules

Prior to returning to work following a positive test result or determination that an employee has violated the DOT regulations regarding illegal drug or alcohol use he or she must complete the following:

1. Arrange for and complete a face-to-face clinical assessment and evaluation from a Company authorized Substance Abuse Professional to determine what assistance is needed by the employee to resolve problems associated with alcohol and/or drug use.
2. Complete all education and/or treatment program(s) that is recommended by the Substance Abuse Professional.
3. Arrange for and complete a face-to-face follow-up evaluation from the Substance Abuse Professional who did the original assessment to determine if the employee has actively participated in the education and/or treatment program and has demonstrated successful compliance with the initial assessment and evaluation recommendations.
4. Provide the Company's Designated Employer Representative with all documents showing evidence that the above steps are completed occurred. In addition, provide written authorization for the release of confidential information and permit the Company Designated Employer Representative to discuss the employee's situation with the Substance Abuse Professional and any education and treatment facilities the employee has used to complete the return to work process.
5. Submit to follow-up drug and/or alcohol testing as directed by the Substance Abuse Professional, Medical Review Officer and Company Designated Employer Representative.
    a. The number and frequency of such follow-up testing shall be determined by a substance abuse professional, but shall consist of at least six tests in the first 12 months following the employee's return to duty. In addition, follow-up testing may include testing for drugs, as directed by the substance abuse professional, to be performed in accordance with 49 CFR part 40. Follow-up testing shall not exceed sixty months from the date of the employee's return to duty. The substance abuse professional may terminate the requirement for follow-up testing at any time after the first six tests have been administered, if the substance abuse professional determines that such testing is no longer necessary.

A.3.12.25 Training for Supervisors

The Company shall ensure that persons designated to determine whether reasonable suspicion exists to require a covered employee to undergo alcohol testing receive at least sixty minutes of training on the physical, behavioral, speech and performance indicators of probable alcohol misuse.

Supervisory personnel responsible for those employees covered under RSPA rules will receive training that includes at least one 60-minute period of training on the specific, contemporaneous physical, behavioral, speech and performance indicators of probable alcohol misuse and one 60-minute period of training on the specific, contemporaneous physical, behavioral and performance indicators of probable drug use.

A.3.12.26 Definitions

Accident - an incident reportable under Part 191 involving gas pipeline facilities or LNG facilities or an accident reportable under Part 195 involving hazardous liquid or carbon dioxide pipeline facilities.

An event that involves a release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility and:

1. A death, or personal injury necessitating inpatient hospitalization; or
2. Estimated property damage, including cost of gas lost, to the operator or others, or both, of $50,000 or more.

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

1. Explosion or fire not intentionally set by the operator.
2. Loss of 50 or more barrels of hazardous liquid or carbon dioxide.
3. Escape to the atmosphere of more than five barrels a day of highly volatile liquids.
4. Death of any person.
5. Bodily harm to any person resulting in one or more of the following:
    a. Loss of consciousness.
    b. Necessity to carry the person from the scene.
    c. Necessity for medical treatment.
    d. Disability which prevents the discharge of normal duties or the pursuit of normal activities beyond the day of the accident.
6. Estimated property damage, including cost of clean-up and recovery, value of lost product and damage to the property of the operator or others, or both, exceeding $50,000.

Covered employee - any person who performs on a pipeline or LNG facility an operating, maintenance, or emergency response function regulated by Parts 192, 193, or 195. Such person may be employed directly by the operator, or by a contractor engaged by the operator. As applied in the regulations, "employee" and "applicant for employment" have the same meaning for the purpose of these requirements. Clerical, truck driving, accounting, or other job functions not covered by Parts 192, 193 and 195 are not subject to the regulations.

Covered Function (safety-sensitive function) - an operation, maintenance, or emergency-response function that is performed on a pipeline or LNG facility and the function is regulated by Parts 192, 193, or 195.

Refusal to submit to testing - The following constitute a refusal to take a test:

1. The employee or applicant fails to appear for any test within a reasonable time, as determined by the Company, after being directed to do so by a supervisor employer.
2. The employee fails to remain at the testing site until the testing process is complete.

A.3.12.26 Definitions, Continued

3. A DOT regulated employee fails to provide a urine specimen for any drug test required by their respective DOT agency regulations.
4. In the case of a directly observed or monitored collection in a drug test, the employee fails to permit the observation or monitoring of your provision of a specimen.
5. The employee fails to provide a sufficient amount of urine when directed and it has been determined, through a required medical evaluation, that there was no adequate medical explanation for the failure.
6. The employee fails or declines to take a second test that the Company or collector has directed you to take.
7. The employee fails to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process, or as directed by the DER as part of the "shy bladder" procedures.
8. The employee fails to cooperate with any part of the testing process (e.g., refuse to empty pockets when so directed by the collector, behave in a confrontational way that disrupts the collection process).

Substance Abuse Professional (SAP) - a licensed physician (Medical Doctor or Doctor of Osteopathy), or a licensed or certified psychologist, social worker, or employee assistance professional; or an addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission or by the International Certification Reciprocity Consortium/Alcohol & Other Drug Abuse). All must have knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled substances-related disorders.

A.3.13 Anti-Drug Plan and Alcohol Misuse Plan Program Providers and Equipments

* 24-hour number

A.3.13 ANTI-DRUG PLAN AND ALCOHOL MISUSE PLAN PROGRAM PROVIDERS AND EQUIPMENTS	
Anti-Drug and Alcohol Misuse Programs Administrator	
David Konz Claims Manager, Tidewater Barge Lines, Inc. Situation Unit Leader Response Training: FEMA 100b, FEMA 200b Response Time: 3 (hours)	360-693-1491 (Office) (b) (6) (Mobile) 360-759-0307 (Direct) P&I Club: West of England, Local Correspondent: Law Office of Schwabe Williamson & Wyatt
Laboratory	
LabCorp	800-833-3984 (Office)
Medical Review Officer	
Stuart Hoffman, MD LexisNexis MRO Services	888-794-6574 (Office) 866-355-1297 (Fax)
Substance Abuse Professional(s) Employee Assistance Program	
Cascade Employee Assistance Program	800-433-2320 (Office)
Evidential Breath Testing Devices	
Ken George Associates	
1. Intoximeters – Alco-Sensor FST	
Intoximeters, Inc.	
2. National Dräger – Breathalyzer 7410	
National DrÃ¤ger, Inc.	970-385-5555 (Office)

APPENDIX B

Last revised: 09/01/2008

CONTRACTOR RESPONSE EQUIPMENT

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B.1 Cooperatives and Contractors

B.1.1 OSRO Classification

Figure B.1-1 - Evidence of Contracts

B.1 COOPERATIVES AND CONTRACTORS

The Company has contracted with additional Oil Spill Removal Organizations (OSROs) to provide personnel and equipment in the event of a spill and for wildlife rehabilitation. The classification, response capabilities and equipment are described below. Refer to the Western Response Resources List (WRRL) at http://www.wrrl.us/index.html for an oil spill response equipment inventory database maintained by regional equipment owners.

B.1.1 OSRO Classification

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

The following is a listing of the USCG classified OSROs for the inland/nearshore and shoreline Captain of the Ports (COTP) operating areas that are contracted by the Company to respond to incidents:

<table>
<tr><th>COMPANY / CONTRACTOR</th><th>APPLICABLE COTP ZONE (S)</th><th>USCG CLASSIFICATIONS</th><th>RESPONSE TIME</th></tr>
<tr><td>National Response Corporation (NRC)

Term of contract: to</td><td></td><td>
<table>
<tr><th></th><th colspan="4">Facilities</th><th colspan="4">Vessels</th></tr>
<tr><th></th><th>MM</th><th>W1</th><th>W2</th><th>W3</th><th>MM</th><th>W1</th><th>W2</th><th>W3</th></tr>
<tr><td>River/Canal</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Inland</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Open Ocean</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Offshore</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Nearshore</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Great Lakes</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>2 hour(s)</td></tr>
<tr><td>Clean Rivers Cooperative

Term of contract: to</td><td>Columbia River</td><td>
<table>
<tr><th></th><th colspan="4">Facilities</th><th colspan="4">Vessels</th></tr>
<tr><th></th><th>MM</th><th>W1</th><th>W2</th><th>W3</th><th>MM</th><th>W1</th><th>W2</th><th>W3</th></tr>
<tr><td>River/Canal</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Inland</td><td>✓</td><td>✓</td><td>✓</td><td></td><td>✓</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>Open Ocean</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Offshore</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Nearshore</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Great Lakes</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>6 hour(s)</td></tr>
</table>

B.1.1 OSRO Classification, Continued

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

- Tidewater Barge Lines
  Response Time: 1 - 6.5 hours

- Resolve Salvage & Fire (Americas), Inc.
  Response Time: 12 hours

- International Bird Rescue
  Response Time: 9 hours

Equipment lists and evidence of contract for all of the above contractors are maintained at the corporate office and are available upon request. **FIGURE B.1-1** provides evidence of contracts for all of the above contractors and equipment lists for contractors without USCG classification.

FIGURE B.1-1 - EVIDENCE OF CONTRACTS

(All contracts are evergreen and therefore do not expire.)

Clean Rivers Cooperative
- CRC Agreement

International Bird Rescue
- Contract

National Response Corporation (NRC)
- Contract
- Equipment Schedule

Resolve Salvage & Fire (Americas), Inc.
- Agreement Cover Sheet
- Funding Agreement
- Certificate of Coverage
- Vessel Pre-Fire Plan Receipt & Certification of Acceptability

Tidewater Barge Lines
- Tidewater Chevron Letter of Intent
- Tidewater Equipment List 2/2014

MEMBER SERVICES AGREEMENT

TIDEWATER BARGE LINES, INC.

This Member Services Agreement (this "Agreement") is between Clean Rivers Cooperative, Inc., an Oregon cooperative corporation ("CRC") and Tidewater Barge Lines, Inc., an Oregon corporation ("Member").

Recitals

A. CRC coordinates the containment and cleanup of oil spills primarily in portions of the Columbia and Willamette rivers for, among other parties, members of CRC's cooperative organization (its "Members"). CRC provides these oil spill response resources by owning, maintaining, and operating certain vessels and equipment, as well as contracting with independent service providers to provide the services.

B. Member uses, transports, and stores oil and petroleum products in or near portions of the Columbia, Willamette, Snake, and Clearwater rivers, both in terminal facilities and on vessels (primarily tugs and barges).

C. Member maintains an oil spill contingency plan under the laws of the State of Washington and Oregon entitled the Tidewater Integrated Contingency Plan, covering Member's terminal facilities and vessels (the "Tidewater Contingency Plan").

D. Concurrently with the execution of this Agreement, Member will become a member of CRC under a separately documented transaction. Member wishes to enter into a contract with CRC to expressly facilitate CRC' s provision of oil spill containment and cleanup services to Member's facilities and vessels, in furtherance of the goals of the Tidewater Contingency Plan.

E. CRC wishes to enter into such a contract under the terms and conditions set forth in this Agreement.

Agreement

1. **Definitions**. Unless defined elsewhere in this Agreement, capitalized terms used in this Agreement will have the meanings ascribed to them in the attached Appendix A.

2. **Services**.

(a) Response Services.

(i) CRC will provide the services described in this Section 2 to Member's facilities and vessels within the Area of Interest. Member may identify CRC in the Tidewater Contingency Plan as being available to provide oil spill assistance to Member in connection with its Member Spills within the Area of Interest.

(ii) CRC will provide the Services with the level of response capability set forth on the attached Schedule 1 (the "Response Capability Description"). CRC may

periodically update and circulate to Member a revised Response Capability Description, as CRC's Equipment and personnel capabilities change.

(iii) The Services will consist of maintaining the capacity to respond on a standby basis for potential spills and providing actual cleanup and containment in the event of an actual spill, subject to the priorities set forth in Section 2(c) and the potential unavailability of Equipment and personnel due to breakdown and similar circumstances.

(iv) The provision of Services using the Equipment, supplies and personnel available for containment or cleanup of oil spills will be attempted only after full consideration of the safety of personnel and equipment, recognizing environmental considerations such as river conditions, temperature, wind, weather-related visibility restrictions, and problems that are to be anticipated in conducting oil spill responses within the Area of Interest. Initial deployment of response vessels and on-scene decisions on issues of safety, personnel, deployment and recovery of equipment and departure to a safe haven will be the sole prerogative of each response vessel's crew chief. Aerial surveillance equipment will be deployed only after appropriate approvals are obtained, taking into consideration the factors stated above.

(b) Designated Spills.

(i) In the event of an actual or threatened Member Spill originating within the Area of Interest, and if Member desires Services with respect to such spill, then Member will promptly notify CRC of the actual or threatened Member Spill. The initial notification of a spill must include the location and nature and size of the Designated Spill, if known. The initial notification may be oral but must be confirmed in writing as soon as practicable. Upon receipt of the notice, CRC will provide the Services to Member, utilizing the requested Equipment and supplies. Member will receive such cleanup services as may be required in containing and cleaning up such spill. During the time such Equipment and supplies are so utilized, complete possession and control thereof will be maintained by CRC.

(ii) If the Designated Spill originates within the Area of Interest but the containment and cleanup requires Services or use of the Equipment and supplies outside of the Area of Interest, Member may continue to receive the Services, as may be reasonably required and subject to requirements of applicable law.

(c) Priority. The parties explicitly acknowledge that CRC will respond to requests for Services on a "first come, first served" basis; i.e., CRC will respond to member calls for oil spill containment and cleanup services in the order that requests are received. CRC may also respond to Non-member calls for services. If CRC has responded to a prior member or Non-member oil spill, except to the extent a responsible governmental agency has expressly directed otherwise, CRC will not be obligated to respond to the request of Member for Services until the prior project is completed to the extent necessary to allow for the release of Equipment or supplies to Member.

(d) Control. As between CRC and Member, Member will retain overall control over the conduct of the response to a Member Spill, provided, however, this will not require CRC or its personnel to disregard applicable treaties, laws, regulations, contractual obligations, or safe and prudent operating practices, nor will it detract from CRC's discretion regarding actual operational control of its Equipment and personnel as set forth elsewhere in this Agreement.

3. **Fees and Charges.**

(a) Annual Membership Fee. Member will pay to CRC an annual membership fee of $3,200. CRC will bill annually for this fee, and Tidewater will pay within 45 days of billing.

(b) Continued Access to Certain Tidewater Emergency Oil Spill Response Equipment. CRC and the Maritime Fire and Safety Association ("MFSA") will continue to have access to certain emergency oil spill response equipment and services made available by Tidewater to CRC and MFSA under the Updating Amendment between such parties dated October 22, 2001, as such agreement may be amended from time to time (the "Oil Barge Agreement"). This Agreement does not amend the Oil Barge Agreement and, as of the effective date of this Agreement, the Oil Barge Agreement remains in full force and effect. Aside from the foregoing, this Agreement will not be construed to provide that CRC, MFSA, or the members of either entity will have access to the Tidewater Contingency Plan or Member's emergency oil spill response equipment without prior authorization from Member.

(c) Direct Costs. Member will pay all Direct Costs resulting from any of Member's Designated Spills, provided, however, that Member will receive a credit for the Equipment rental rate. Payment terms for Direct Costs will be such as CRC may establish from time to time.

4. **Independent Cleanup Operations.** Nothing in this Agreement will be construed as requiring Member to request Services under this Agreement in connection with Member's oil spill cleanup or containment needs and Member may, if it so desires, purchase or contract for its own cleanup resources, or engage any other person to assist Member with the cleanup of spills. Further, Member may use its own equipment and materials in conjunction with Equipment provided by CRC.

5. **Representations, Warranties, and Covenants of CRC.** CRC represents, warrants, and covenants as follows:

(a) CRC has maintained and will maintain all U.S. federal and state approvals, licenses, and classifications that are necessary for CRC to perform its obligations under this Agreement;

(b) CRC will comply with all laws, regulations, decrees, codes, ordinances, resolutions, and other acts of any governmental authority;

(c) CRC will not discriminate against any employee because of race, creed, sex, or national origin; and

(d) CRC will implement employee drug and alcohol testing policies and procedures in a manner consistent with applicable law.

6. **Indemnification.**

(a) Member Indemnification. Member, on its behalf and on behalf of its employees, directors, authorized representatives and agents, and successors-in-interest (collectively for purposes of this Section 6, "Member"), will indemnify, defend, and hold harmless CRC and its employees, directors, authorized representatives and agents, and successors-in-interest

(collectively for purposes of this Section 6, "CRC") from and against any and all losses, liabilities, claims, demands, costs, and causes of action, whether equitable or otherwise, including without limitation pollution liabilities and/or liabilities based on strict liability, to the extent caused by Member's failure to observe or comply with any applicable law, regulation, or lawful authority, or Member's failure to observe or comply with and fulfill its obligations under this Agreement, or as a result of the gross negligence or willful misconduct of Member, excepting only as hereinafter provided.

(b) Additional Member Indemnification. Without limitation of the provisions of the foregoing subsection, Member will additionally indemnify, defend, and hold harmless CRC from and against all losses, liabilities, claims, demands, costs, and causes of action, whether equitable or otherwise, for removal costs and damages under § 1002 of the Oil Pollution Act of 1990, as amended ("OPA '90") or corresponding state law which may result from actions or omissions of CRC in the course of providing Services in connection with a discharge or threatened discharge (as defined by OPA '90 or equivalent state law) consistent with the National Contingency Plan or as otherwise directed by Member, the U.S. Coast Guard, or other governmental authorities, which CRC may suffer, incur, or pay out, subject only to the following exceptions:

(i) to the extent CRC is held to be entitled to full immunity from liability under all applicable federal and state responder immunity laws, in which event Member will only be required to indemnify CRC for the reasonable attorneys' fees actually expended to establish such immunity or defense;

(ii) to the extent that such losses, liabilities, claims, demands, costs, and causes of action which are subject to the obligations to indemnify, defend, and hold harmless hereunder are the proximate result of the gross negligence or willful misconduct of CRC;

(iii) to the extent Member would have been entitled to a defense to liability under applicable federal or state law had such claim, demand, or cause of action been made against Member or the vessel(s) owned or operated by Member subject to this Agreement, directly;

(iv) to the extent such payment or indemnification would result in a payment by Member in excess of the highest amount to which Member would have been entitled to limit liability under all applicable federal or state laws had such claim, demand, or cause of action been made against Member or any vessel owned or operated by Member subject to this Agreement, directly; or

(v) losses, liabilities, claims, demands, costs, and causes of action arising in respect of death or personal injury.

(c) CRC Indemnification. CRC will indemnify, defend, and hold harmless Member from and against any and all losses, liabilities, claims, demands, costs, and causes of action, whether legal or equitable, which Member may suffer, incur or pay out to the extent caused by:

(i) CRC's breach of any representation, warranty, or covenant in this Agreement; or

(ii) CRC's gross negligence or willful misconduct, excepting to the extent such losses, liabilities, claims, demands, costs and causes of action occur as a result of Member's failure to observe or comply with any applicable law, regulation or lawful authority, or failure to observe or comply with and fulfill its obligations under this Agreement, or as a result of the gross negligence or wrongful acts or omissions of Member or third parties, and except to the extent Member has released or has purported to release CRC, its directors, members, member companies (past and present), employees, directors, and authorized representatives and agents under Section 6(e) below.

(d) Alternative Indemnification Provisions. In the event any protection and indemnity club providing enrollment or coverage for any vessel owned or operated by Member approves indemnification language in any other contract for the provision of similar oil spill response services, CRC may, upon reasonable notice to Member, adopt such indemnification language in substitution of this Section 6 or any relevant part thereof.

(e) Release. Member irrevocably releases and forever discharges CRC, its directors, members, member companies (past and present), employees, and authorized representatives and agents from liability for any and all losses, liabilities, claims, demands, costs, and causes of action, whether legal or equitable, including but not limited to claims for contribution, breach of contract, tort, or otherwise, to the fullest extent permitted by the applicable laws of the States of Oregon and Washington and U.S. federal law, and specifically, without limitation, such matters arising from the affirmative or passive negligence of CRC or otherwise vicariously attributable to CRC, which Member currently has or may have, either jointly or severally, against CRC, its employees, directors, or authorized representatives or agents, based on, related to, or arising in connection with this Agreement or any performance or alleged failure to perform under this Agreement, except to the extent they arise from: (i) the gross negligence, willful misconduct, or illegal activity of CRC or other beneficiaries of the foregoing release; or (ii) CRC's failure to observe or comply with its obligations under this Agreement.

(f) Member Covenant. Member covenants that neither Member nor its assigns and successors-in-interest will: (i) file a cross-claim or counter-claim against CRC; or (ii) assert the legal liability of CRC as a defense in any legal proceeding arising from, related to, or in connection with this Agreement or concerning any claim brought by any third person or entity against Member related to the furnishing of Services under this Agreement, excepting only as necessary to declare the rights or liabilities of the parties under this Agreement.

(g) Member Breach. CRC may, at its option, consider Member's breach of this Section 6 to be a breach of this Agreement, and, in addition to any other right or remedy arising under this Agreement or by operation of law, support the legal liability of Member for any incidental or consequential damages of CRC arising from or related to such breach, including without limitation, any and all attorneys' fees and expenses incurred by CRC in defending in any arbitration or litigation resulting from such breach.

(h) Cumulative Rights and Duties. The parties' respective duties to indemnify, defend, and hold harmless, as well as the release set forth in this Agreement are in addition and cumulative to any rights or duties accruing in favor of any party pursuant to any policy of insurance or protection and indemnity club enrollment, or otherwise.

(i) Continuing Effect. This Section 6 will remain in full force and effect notwithstanding the existence of any breach or default by any party under this Agreement, and will specifically survive the expiration or termination of this Agreement.

7. **Insurance.**

(a) CRC's Insurance.

(i) CRC will secure and maintain the following insurance:

(1) hull and machinery insurance, including running down clauses, for all of its vessels in the full commercial value;

(2) protection and indemnity insurance for each of CRC's covering, inter alia, liability to crew members, in the minimum amount of $5,000,000 per occurrence;

(3) tower's liability insurance in the minimum amount of $5,000,000 per occurrence;

(4) pollution cleanup and third party liability insurance, including water quality insurance syndicate insurance as required by law;

(5) general liability insurance, including workers compensation insurance and United States Longshore and Harborworker's Compensation Act insurance; and

(6) such other insurance as the members of CRC may from time to time direct.

(ii) All policies will name Member as an additional assured, except regarding coverage required in subsections (4), (5), and (6), as to which CRC will use its reasonable efforts to have Member so named. All policies will be endorsed to waive the right of subrogation against Member, and, with the exception of workers compensation and United States Longshore and Harborworker's Compensation Act policies, will be endorsed to be primary as against comparable insurance carried by Member.

(iii) The cost of the insurance coverage required to be secured by CRC under subsection (i) above will be deemed a normal cost of operations and will not be chargeable to Member as a Direct Cost under Section 3 of this Agreement. Any additional insurance coverage which CRC may be required to obtain in connection with a specific Member Spill will be chargeable to Member as a Direct Cost under Section 3 of this Agreement.

(b) Subcontractors' Insurance. CRC will require that all of its subcontractors employed in the response to Member Spills have insurance for liabilities incurred in connection with the response and will obtain documentary evidence that such insurance has been placed and that such insurance adds CRC and Member as additional assureds with waivers of the right of subrogation against each party, and will forward copes of such documentation to Member.

8. **Term; Termination.**

(a) Term. The term of this Agreement will begin on the effective date of this Agreement and end on December 31, 2004 and, thereafter, the term will be renewed automatically, without notice, for successive one-year terms beginning on each January 1 and ending on each December 31, unless earlier terminated pursuant to Sections 8(b) or 8(c).

(b) Termination upon Termination of Membership. This Agreement will terminate, without notice, automatically and concurrently upon the effective date Member ceases to be a member of CRC as provided in the Bylaws (the "Termination Date"). Within thirty (30) days of the Termination Date, Member will pay to CRC all unpaid Direct Costs due for all periods prior to the Termination Date and CRC will reimburse Member its Percentage Interest of all prepaid Direct Costs with respect to periods subsequent to the Termination Date. Member will remain liable for later-discovered additional Direct Costs relating to periods prior to the Termination Date.

(c) Termination upon Dissolution of CRC. This Agreement will terminate without notice, automatically and concurrently upon dissolution of CRC.

9. **Member Representative.** The Representative(s) of Member appointed from time to time under the Bylaws will represent Member in its communications and transactions with CRC under this Agreement. CRC and the other members of CRC may rely upon the power and authority of the Representative(s) to represent and bind Member in all matters pertaining to this Agreement.

10. **Miscellaneous.**

(a) Contingencies. Neither party will be responsible for failure to perform the party's obligations under this Agreement due to contingencies beyond the party's reasonable control, including but not limited to earthquakes, floods, tornadoes, and other acts of Nature, fires, epidemics, wars, riots, labor unrest, revolutions, acts of civil or military authorities, sabotage, or nuclear incidents. If any obligation of a party will be delayed by a contingency, the party will promptly notify the other party. Each party will use commercially reasonable efforts to remove the contingency as soon as practicable.

(b) No Assignment. Member may not assign or delegate any of Member's rights or obligations under this Agreement to any person without the prior written consent of CRC, which CRC may not withhold unreasonably.

(c) Binding Effect. This Agreement will be binding on the parties and their respective successors and permitted assigns, and will inure to their benefit.

(d) Amendment. This Agreement may be amended only by a written agreement signed by each party.

(e) Notices. All notices or other communications required or permitted by this Agreement must be in writing, must be delivered to the parties at the addresses set forth below (or any other address that a party may designate by notice to the other parties) and are considered delivered (1) upon actual receipt if delivered personally, by fax, or an overnight delivery service;

and (2) at the end of the third business day after the date of deposit in the United States mail, postage pre-paid, certified, return receipt requested.

To CRC:	To Member:
Clean Rivers Cooperative, Inc. 200 SW Market, Suite 190 Portland, OR 97201 Fax: (503) 295-3660 Attn: Brent Way, General Manager	Tidewater Barge Lines, Inc. P.O. Box 1210 6305 NW Old Lower River Rd Vancouver, WA 98660 Fax: (360) 694-8981 Attn: Holly Robinson

(f) Waiver. No waiver will be binding on a party unless it is in writing and signed by the party making the waiver. A party's waiver of a breach of a provision of this Agreement will not be a waiver of any other provision or a waiver of a subsequent breach of the same provision.

(g) Severability. If a provision of this Agreement is determined to be unenforceable in any respect, the enforceability of the provision in any other respect and of the remaining provisions of this Agreement will not be impaired.

(h) Further Assurances. The parties will sign other documents and take other actions reasonably necessary to further effect and evidence this Agreement.

(i) Termination. The termination of this Agreement, regardless of how it occurs, will not relieve a party of obligations that have accrued before the termination.

(j) Survival. All provisions of this Agreement that would reasonably be expected to survive the termination of this Agreement will do so.

(k) Attachments. Any exhibits, schedules, and other attachments referenced in this Agreement are part of this Agreement.

(l) Remedies. The parties will have all remedies available to them at law or in equity. All available remedies are cumulative and may be exercised singularly or concurrently.

(m) Governing Law. This Agreement is governed by the laws of the State of Oregon, without giving effect to any conflict-of-law principle of any jurisdiction.

(n) Venue. Any action or proceeding arising out of this Agreement will be litigated in courts located in Multnomah County, Oregon. Each party consents and submits to the jurisdiction of any local, state, or federal court located in Multnomah County, Oregon.

(o) Attorney's Fees. If any arbitration or litigation is instituted to interpret, enforce, or rescind this Agreement, including but not limited to any proceeding brought under the United States Bankruptcy Code, the prevailing party on a claim will be entitled to recover with respect to the claim, in addition to any other relief awarded, the prevailing party 's reasonable attorney's fees and other fees, costs, and expenses of every kind incurred in connection with the arbitration, the litigation, any appeal or petition for review, the collection of any award, or the enforcement of any order, as determined by the arbitrator or court.

(p) Entire Agreement. This Agreement contains the entire understanding of the parties regarding the subject matter of this Agreement and supersedes all prior and contemporaneous negotiations and agreements, whether written or oral, between the parties with respect to the subject matter of this Agreement.

(q) Signatures. This Agreement may be signed in counterparts. A fax transmission of a signature page will be considered an original signature page. At the request of a party, a party will confirm a fax-transmitted signature page by delivering an original signature page to the requesting party.

(r) **Attorneys. The parties understand that the law firm of Schwabe, Williamson & Wyatt, P.C. has served as legal counsel to CRC in the negotiation of the terms of this Agreement, and does not represent any other party in connection with this Agreement. Each of the other parties to this Agreement acknowledges that the party has consulted with the party's own legal counsel or has knowingly waived the party's right to do so.**

[Signature page follows]

Dated effective: October 22, 2004

CLEAN RIVERS COOPERATIVE, INC., an Oregon cooperative corporation

By: _____
Brent Way, General Manager

TIDEWATER BARGE LINES, INC., an Oregon corporation

By: _____
Print name: _____
Title: _____

APPENDIX A

Definitions

"Area of Interest" means the navigable portions of the Columbia River below Priest Rapids Dam to river mile 0, the Snake River below river mile 141, the Clearwater River below the Clearwater River Memorial Bridge, and the Willamette River below Willamette Falls.

"Bylaws" means the Bylaws of CRC as in effect from time to time.

"Designated Spill" means a specific actual or threatened spill of Oil upon land or water within the Area of Interest as designated by Member to CRC and for which Services are requested under this Agreement.

"Direct Costs" means all identifiable direct operating expenditures involved in any particular oil spill cleanup or containment activity, including but not limited to: costs for equipment not owned or leased on a regular basis by CRC; all materials, fuel, and oil used during the cleanup or containment operation; additional employees or independent contractors engaged by CRC to assist with cleanup or containment of a Designated Spill; overtime paid to regular employees of CRC as a result of the cleanup or containment activity; subsistence and lodging required for personnel engaged in the cleanup or containment activity; additional insurance premiums reasonably required in order to provide the Services; and the cost of repairs, maintenance, and cleaning of Equipment required as a result of the cleanup or containment activity. The cost of the Equipment will not be included in Direct Costs.

"Equipment" means the vessels (including their crews) and equipment owned, leased on a regular basis, subcontracted for, or otherwise regularly used or operated by CRC in order to make available the Services.

"Member Spill" means a spill of Oil that has been included in Member's performance statistics (as such term is used in Section 7.1 of the Bylaws), including Oil owned by a Non-member if included in Member's performance statistics in accordance with the Bylaws.

"Non-member" means any person who is not at the relevant time a member of CRC.

"Oil" means oil of any kind or in any form, including but not limited to crude oil, petroleum, fuel oil, sludge, slops, oil refuse, oil mixed with wastes other than dredged soil, and non-petroleum edible oils.

"Percentage Interest" means a percentage which is equal to Member's Membership Interest in CRC, as determined under the Bylaws. The Percentage Interest will remain the same as, and change consistent with, Member's Membership Interest as it may be adjusted from time to time pursuant to the Bylaws.

"Services" means the standby availability and specific oil spill containment and cleanup services rendered by CRC as further described in Section 2.

SCHEDULE 1

Response Time

Equipment will be available at the Tidewater Industrial Center (Port of Vancouver) for deployment to a spill or drill site within 12 hours after CRC receives notification from Tidewater requesting use. Boom may be tendered either by boat or trailer.

INTERNATIONAL BIRDRESCUE
EVERY BIRD MATTERS™

Retainer Agreement

International Bird Rescue

This RETAINER AGREEMENT dated this 1 October, 2012, is between Tidewater Barge Lines and hereinafter referred to as "Client", with principal offices currently at 6305 NW Old Lower River Rd, Vancouver, WA 98660, and International Bird Rescue (hereinafter referred to as "Bird Rescue"), a 501(c)(3) non-profit organization with principal offices currently at 444 West Ocean Blvd., Ste. 777, Long Beach, CA 90802, USA.

WHEREAS, Bird Rescue has significant knowledge and expertise relative to oiled wildlife rescue and rehabilitation and emergency response arising as a result of oil spills; and,

WHEREAS, Client desires to secure assured response by Bird Rescue to oil spills in the United States, as defined in the Oil Pollution Act of 1990,

NOW, THEREFORE, in consideration of the mutual benefits to be derived from this Agreement, the Client and Bird Rescue agree as follows:

Effective Date: This Agreement is effective as of the first date above written and shall remain in effective unless cancelled by either party 30 days prior to the anniversary date of January 1.

SERVICES

International Bird Rescue Response Services: During the term of this Retainer Agreement Bird Rescue will be available to perform oiled wildlife rescue, rehabilitation and documentation services on an assured response basis, using criteria agreed to by both parties. Bird Rescue initial assessment personnel will be dispatched within eight hours after notification or as agreed upon by both parties, and will perform those services for Client or Client's designated representative in connection with Client's operations.

Upon activation and following consultation with Client, Bird Rescue will commence activation and deployment of a trained response team whose duties include the following in accordance with all elements of Bird Rescue's oiled wildlife care protocols that include:

- Initial wildlife impact assessment with trustee agencies & Client

- Facility design/operation as needed
- Overall management of rehabilitation program
- Veterinary medical evaluation, monitoring, treatment
- Management of field collection of wildlife as needed
- Wildlife evaluation, triage, re-hydration, stabilization, washing, drying, waterproofing and other aspects of the rehabilitation process.
- Volunteer/work force recruitment, training, management
- Pre-release medical/physical evaluation
- Wildlife dietary planning, preparation, support
- Public affairs & media contact
- Documentation, cost tracking, misc.

Client Response Services: It is recognized that the Client has specific resources, which can maximize the efficiency of a field rehabilitation effort. The Client will supply the following:

- Rehabilitation facility acquisition/modification
- Wildlife rescue boats, motor vehicles and equipment as needed and agreed to by both parties
- Funding for all reasonable travel, food, lodging expenses.
- Protective clothing, materials, etc. if needed.
- Volunteer meals

Literature: Bird Rescue will provide to Client, at no cost, a library copy of Bird Rescue literature and other training material as published.

BILLING:

Retainer: Client agrees to pay to Bird Rescue annually as a retainer for assured response services to be performed herein within the United States as defined in the Oil Pollution Act of 1990, the sum of $6,600.00 annually. This retainer shall apply to any subsidiary or affiliate for which Client holds a 50% or greater interest, and such subsidiary or affiliate shall be entitled to the benefits earned by Client as a result of retaining Bird Rescue. A list of subsidiaries and affiliates covered by this agreement shall be attached herein, by the Client.

Response Expenses: When Bird Rescue is activated for response to an oil spill Client will pay directly those charges associated with personnel, fabrication of field rehabilitation facilities and charges for supplies associated with rehabilitation activities including wildlife capture, animal food, medical equipment, washing supplies, etc. During response to an oil spill, Bird Rescue shall invoice Client every fourteen (14) days for personnel fees, Activation Fee, 15% Administrative fee and expenses with said invoices to be paid within ten (14) days of receipt of invoice. All such expenses shall be supported by receipts or other evidence showing the amount of each expense. A current, retainer holder fee-schedule must be signed by client or responsible designated agent within forty-eight (48) hours of activation of Bird Rescue response personnel. In the event of a dispute, Client shall pay all undisputed sums and shall exert all reasonable efforts to resolve the dispute with the parties.

Service Expenses (training, consultation, etc.): When Client requests services not covered by this retainer, Client agrees to pay for such services, in accordance with previously agreed to Bird Rescue fees and daily rates. Out-of-pocket expenses incurred in provision of services will be invoiced at cost by Bird Rescue to Client, with payment due within 30 days of receipt of invoice.

Audit: Bird Rescue will keep and maintain records related to services rendered for a period of three years. Such records will be made available to the Client for auditing purposes upon reasonable notice.

Independent Contractor: Bird Rescue will perform all services herein as an independent contractor. Nothing herein will be deemed to create an employee-employer or agent-principal relationship between Bird Rescue and the Client.

Authority: Nothing herein will be deemed to authorize Bird Rescue to act as Client's agent or legal representative. Bird Rescue hereby acknowledges that it is not authorized to act as Clients agent or legal representative or to otherwise act in the name of or on behalf of Client.

Body of Knowledge: Client agrees that scientific data derived during response may be used by Bird Rescue in preparation of articles, training, books or other educational materials concerning improvement of wildlife rehabilitation protocols. Bird Rescue shall treat any information relating to Client's operations as confidential and will not disclose it to any other party.

Indemnification: Client agrees to indemnify and hold Bird Rescue, its employees, consultants and agents harmless from and against all loss, damage, expense, injury to or death of persons and loss or damage to property, including property of Client, in any manner arising out of the Services provided hereunder, and agrees to pay all damages, costs, and expenses, including attorney's fees, arising in connection therewith.

Bird Rescue waives any claimed right to bring any action against Client for loss of life, injury or property damage, which may occur as a result of work operations conducted under this agreement.

However, the indemnity obligation shall not extend to claims and liabilities for injury or death to persons or damage to property resulting solely from Client's or Bird Rescue's negligence or willful misconduct.

Assignment: This Agreement will be deemed to require the performance of professional services by Bird Rescue. Neither Bird Rescue nor the Client may delegate or assign duties under this agreement without approval of the other.

Governing Law: Any disputes arising out of this agreement will be put to arbitration in New York, in accordance with the laws of the State of California, before one arbitrator, to be appointed by the senior judge of the U.S. District Court for the State of New York, at his discretion.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed in their respective names as of the day and year first below written.

Tidewater Barge Lines

By William H. Collins WILLIAM H. COLLINS

Title Director, EH&S

Date 10/05/12

International Bird Rescue

By PAUL KELLOGG

Title EXECUTIVE DIRECTOR

Date 10/09/12

Revised 9/2012

National Response Corporation
Agreement for Provision of Response Resources

NATIONAL RESPONSE CORPORATION

AGREEMENT FOR PROVISION OF RESPONSE RESOURCES

BETWEEN

NATIONAL RESPONSE CORPORATION

AND

TIDEWATER TERMINAL CO.

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THIS AGREEMENT is made as of the 28th day of September 2012,

BETWEEN:

(1) NATIONAL RESPONSE CORPORATION, a corporation incorporated and existing under the laws of Delaware and having its principal office at 3500 Sunrise Highway, Great River, New York 11739 (the "Provider"); and

(2) the entity or entities identified on Schedule 1 as the "Client".

WHEREAS:

(A) The Client is entering into this Agreement in the capacity described in Schedule 1 with respect to the Facility(ies) described in Schedule 1;

(B) Pursuant to federal law of the United States and the laws of various states of the United States, the Client or the principals on whose behalf the Client is acting may be required to evidence preparedness to respond to discharges of oil from Facilities in United States navigable waters, including precontracting to meet planning requirements;

(C) The Provider has, or through a network of independent contractors has access to, resources to respond to discharges of oil from Facilities as required under federal law in Section 4202 of the United States Oil Pollution Act of 1990 and under state laws and as denominated in Facility response plans;

(D) The Provider and Client understand that the requirements for mobilization of response resources set forth under federal law, state laws or in Facility response plans are planning requirements and are not performance requirements;

(E) The Client or the principals on whose behalf the Client is acting desire to name the Provider as its Oil Spill Removal Organization in the response plans for the Facilities referred to herein;

(F) The Client has agreed to appoint the Provider to act as an Oil Spill Removal Organization upon and subject to the terms and conditions of this Agreement; and

(G) The Provider accepts such appointment and agrees to act as an Oil Spill Removal Organization upon and subject to the terms and conditions of this Agreement.

BY WHICH IT IS AGREED AS FOLLOWS:

1. **INTERPRETATION**

1.1 In this Agreement (including Schedules):

"Area of Service" means, the geographical area described in Schedule 2;

"Best Endeavors" means, with respect to either party, the performance in good faith to the extent of its total capabilities;

"Classification" means classification or other governmental approval required or available under Federal Law and State Law for an Oil Spill Removal Organization to be designated as such in the Response Plan;

"Discharge" means any emission (other than natural seepage), including, but not limited to, spilling, leaking, pumping, pouring, emitting, emptying or dumping of Oil;

"Drills" means any drills, exercises, practices or other preparatory or simulated activities in connection with which the Client has requested the Provider to mobilize or deploy Response Resources or to provide other services;

"EPA Final Rule" means the final rule on Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities dated August 30, 1994;

"Facility" means the Facility or facilities identified in Schedule 1;

"Federal Law" means the United States Oil Pollution Act (33 U.S.C. 2701, et seq.) ("OPA") and the Federal Water Pollution Control Act (33 U.S.C. 1321, et seq.) ("FWPCA") and any other federal laws regarding a Discharge and Response Activities and regulations promulgated pursuant thereto;

"Hazardous Substances" means substances defined as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601, et seq.);

"Local Contractors" means independent oil spill removal companies located in the various states with whom the Provider has contracted to maintain and provide Response Resources in fulfillment of the Provider's obligations hereunder;

"Marine Oil Pollution Insurance" means terminal owners and operators insurance from the insurer named on Schedule 1 or another insurer acceptable to the Provider providing insurance cover for U.S. oil pollution liabilities, including removal costs, or such other form of insurance for oil pollution liabilities, including removal costs, as may be acceptable to the Provider;

"National Contingency Plan" means the National Contingency Plan prepared and published under Section 311 (d) of the FWPCA;

"Oil" means oil of any kind or in any form, including any and all substances defined or identified as oil under OPA, but shall not include substances defined or identified as Hazardous Substances;

"Oil Spill Removal Organization" means an entity established in a given geographic area to provide the personnel, equipment, supplies and other capability necessary to conduct Response Activities;

"Qualified Individual" means an English-speaking shore-based representative of the Client located in the United States, available on a 24-hour basis, familiar with implementation of the Response Plan and trained in his or her responsibilities under the plan, with full written authority to implement Response Activities and to engage the Provider for services hereunder;

"Removal Costs" means the charges of the Provider for deploying Response Resources to a Discharge or threatened Discharge, including the charges for mobilization and demobilization of personnel, equipment and supplies; amounts reasonably paid to compensate third parties for

property damaged or destroyed at the express instruction of the Client or Qualified Individual; and containment, removal and storage of discharged Oil;

"Responder Immunity Law" means Federal Law or applicable State Law which provides immunity from liability to those who respond to Discharges for the purpose of attempting to contain and remove Oil from the water, beaches or shoreline;

"Response Activities" means the action to contain and remove Oil from water, beaches and shorelines, the storage and disposal of recovered Oil, and other actions, including mobilization and demobilization of personnel, equipment, supplies and other capability as necessary to minimize or mitigate damage to the environment;

"Response Plan" means any contingency plan or response plan regarding Discharges covering the Facility prepared by or on behalf of the Client pursuant to Federal Law or State Law;

"Response Resources" means the trained personnel, equipment, supplies and other capability named in a Response Plan or mobilized to perform Response Activities pursuant to Federal Law and State Law, other than personnel, equipment, supplies and other capability required to be stored at the Facility;

"State Law" means the laws and regulations, if any, of the various state and local governments of any relevant state of the United States within the Area of Service regarding Discharges into navigable waters and Response Activities;

"U.S. Waters" means the navigable waters of the United States, including the waters of the Exclusive Economic Zone and the territorial waters of the states of the United States, all within the Area of Service;

1.2 Clause headings and the table of contents are inserted for convenience of reference only and shall be ignored in the interpretation of this Agreement.

1.3 Reference to Client shall include the Client or authorized agent or representative of the Client, and where the Client is acting as agent it shall include the principal(s) on whose behalf the Client is acting. Where the Client is acting on behalf of more than one principal, the rights and obligations of each principal shall be limited to the Facility(ies) owned and/or operated by such principal.

1.4 In this Agreement, unless the context otherwise requires:

(a) references to any law enactment, regulation shall be deemed to include references to such law, enactment or regulation as re-enacted, amended, extended, consolidated or replaced and any orders, decrees, proclamations, regulations, instruments or other subordinate legislation made thereunder;

(b) words importing the plural shall include the singular and *vice versa*;

(c) the word "including" shall be construed as being by way of illustration or emphasis only and shall not be construed as, nor shall it take effect as, limiting the generality of any foregoing words.

2. PROVIDER'S OBLIGATIONS

2.1 The Provider shall provide, or cause to be provided, the services set out below for the Client and the Facilities within the Area of Service in exchange for the Basic Compensation provided in Clause 4:

(a) sufficient Response Resources to enable the Client to meet the requirements of Federal Law and State Law for precontracting for availability of Response Resources, except as provided in 2.4;

(b) the training of the Provider's and Local Contractors' response personnel, exclusive of Drills requested by the Client, in compliance with Federal Law and State Law requirements for Oil Spill Removal Organization Classification, and maintenance of records of such training;

(c) compliance by the Provider and Local contractors with all applicable Federal Occupational Safety and Health Administration (OSHA) standards and similar State Laws and standards; and

(d) all information regarding the Provider's and the Local Contractors' Response Resources which must be included in the Response Plan(s) of the Facility(ies) or to be filed with the U.S. Coast Guard or EPA or appropriate State authorities to obtain Classification.

2.2 The Provider shall provide, or cause to be provided, the services set out below for the Client and the Facility within the Area of Service, upon request from the Client in exchange for the Additional Compensation provided in Clause 4:

(a) supply and deployment of Response Resources required by the Client to conduct Response Activities;

(b) supervision and coordination of deployment and use of Response Resources in such manner as directed by the Client;

(c) the training of personnel of the Client in Response Activities and maintenance of records of such training;

(d) supply and deployment of Response Resources in connection with Drills and maintenance of records of such Drills;

(e) information concerning Response Resources, Response Activities and Removal Costs to assist the Client in connection with legal proceedings or for such other purposes as required by the Client.

2.3 (a) The Provider shall obtain and maintain Classification as an Oil Spill Removal Organization as provided under Federal Law and State Law;

(b) In the event Classification is not available, the Provider warrants that it shall have sufficient Response Resources to enable the Client to meet the mandated levels of response capacity under Federal Law and State Law.

(c) In the event the Provider loses Classification applicable to Covered Facilities, the Provider will inform the Client of as soon as practicable.

2.4 (a) The Provider's obligations hereunder exclude providing Response Resources in accordance with U.S. Coast Guard planning standards for the average most probable discharge.

(b) The Provider shall arrange for the Client to contract with a local Contractor for the purpose of meeting U.S. Coast Guard planning standards for the average most probable discharge excluded under Clause 2.4(a) on an as needed basis and upon request of the Client. The terms and conditions of such engagement, including fees, shall be agreed between the Client and Local Contractor at the time services are rendered. If the Client wants to use such service, it shall notify the Provider by telefacsimile at least twenty-four hours prior to any cargo transfer activity.

2.5 The Provider shall (without prejudice to the generality of any of the obligations, duties, powers and discretion vested in the Provider under or pursuant to this Agreement) be entitled to:

(a) employ such agents as it deems necessary or expedient;

(b) employ or engage trained superintendents, surveyors, engineers, consultants and experts to supervise or advise in relation to the services provided hereunder; and

(c) enter into subcontracts with related parties or independent contractors to perform any part of the services that Provider is obliged to perform under this Agreement.

The Provider shall be an independent contractor and not an agent of the Client.

2.6 Notwithstanding any provision of this Agreement to the contrary, the Provider may, in its discretion, cease to deploy Response Resources for Response Activities of the Client or to provide any other services provided hereunder, if the Client fails (i) to make or secure payment in accordance with, and within the time periods provided within this Agreement or (ii) to maintain adequate Marine Oil Pollution Insurance provided in Clause 3. The continuation of deployment of Response Resources after time periods for payment or security for payment have elapsed shall not be deemed a waiver of the Provider's rights under this Agreement. If the Provider ceases to deploy Response Resources or provide other services, or if the Client instructs the Provider to cease deployment of Response Resources or provide other services, the Provider shall

be entitled to enter into an agreement with any other party, including governmental authorities, to deploy Response Resources or provide other services in connection with the same Discharge. If the Client instructs the Provider to cease deployment due to federalizing of a spill or any other reason, the Client shall be responsible for the costs of reasonable and necessary measures taken by the Provider to demobilize, but not for costs incurred for the account of governmental authorities who may then engage the Provider.

3. CLIENT'S OBLIGATIONS

3.1 The Client shall:

(a) designate a Qualified Individual and provide the Provider with the name, address, twenty four (24) hours-a-day telephone number and telefacsimile number of the Qualified Individual, and shall amend or update this information as necessary;

(b) deliver, or caused to be delivered, to the Provider a copy of each Response Plan, including applicable waivers, and such other information concerning the Facility as the Provider may reasonably request;

(c) pay, or provide security for payment of, services and Removal Costs of the Provider in accordance with Clause 4;

(d) be responsible for deciding which Response Resources shall be requested from the Provider to conduct Response Activities;

(e) be responsible for coordinating and directing overall Response Activities;

(f) be responsible for disposal of all oil and hazardous substances collected by the Provider;

give notice to the Provider of any significant increase in the volume of oil movements or any significant changes in operation of the Facility in accordance with the procedures set forth in Provider's Instructions to Facilities;

(h) maintain in force at all times Marine Oil Pollution Insurance and furnish, whenever requested by the Provider, confirmation of such insurance;

(i) comply with the procedures set forth in Provider's Instructions to Facilities and Instructions to Clients consistent with the Response Plan;

(j) obtain and provide Provider with the Client's Environmental Protection Agency identification number or other such authorization required by law for any Discharge or threatened Discharge classified as a Hazardous Substance, or similar designation, prior to the Provider providing services hereunder.

3.2 Notwithstanding Clause 3.1, the Client shall not be required to utilize the Provider to deploy Response Resources for Response Activities and may arrange for the supply and deployment of Response Resources for Response Activities in the Area of Service by any other person.

4. COMPENSATION

4.1 The Basic Compensation to be paid to the Provider in the form of an Annual Retainer Fee is set forth on Schedule 3.

4.2 The Additional Compensation to be paid to the Provider is as follows:

(a) Response Resources use charges:

The Client shall pay the Provider for Response Resources deployed by the Provider or Local Contractors in connection with Response Activities taken in accordance with the time and material rates set out in Schedule 4.

The Provider alone is responsible for all payments due to the Provider's subcontractors, including Local Contractors, for services rendered.

(b) Other charges:

(i) The Client shall pay the Provider for other services requested by the Client in accordance with the time and materials rates specified in Schedule 4 or at such other rates as may be agreed at the time;

(ii) The Client shall pay the Provider for all reasonable costs of collection, litigation or settlement incurred by the Provider in order to collect unpaid fees for invoices, pursuant to this Agreement, including reasonable attorneys' fees.

4.3 The fees and charges referred to in this Clause shall be established annually and provided to the Client. The Provider's Basic Compensation shall remain fixed during each one year period of this contract subject to adjustments noted on Schedule 3. The Provider's Additional Compensation shall remain fixed during each one year period of this contract subject to adjustments noted on Schedule 4. The Client agrees to pay fees and charges in accordance with the fees and charges in effect at the time the services are rendered.

4.4 The method, terms and conditions of billing and payment are set forth in Schedules 3 and 4.

4.5 The Client shall provide security for payment of charges as follows:

(a) In exchange for the Provider agreeing to immediately respond to the Client's request for deployment of Response

Resources, the Client shall provide in favor of the Provider at the time of signing this Agreement, unless waived by the Provider security in the amount of One Hundred Thousand Dollars (U.S. $100,000) for the payment of Response Resources Use charges set forth in Schedule 4 and any indemnity amount due hereunder. The security may be a credit arrangement, guarantee, standby letter of credit or other form of security acceptable to the Provider. The terms and conditions of the security shall be acceptable to the Provider in its sole discretion. Such security shall remain in place throughout the term, including renewals, of this Agreement.

(b) In order for deployment of Response Resources to continue after Response Resource Use charges have exceeded One Hundred Thousand Dollars (U.S. $100,000) or after the expiry of the first forty-eight hours (48) following the Client's request for deployment, whichever occurs first, the Client shall arrange security for payment as follows:

(i) deposit funds in an escrow account with an escrow agent on such terms as are acceptable to the Provider;

(ii) a standby letter of credit in favor of the Provider issued on terms and by a commercial bank acceptable to Provider;

(iii) a guarantee in favor of the Provider issued on terms and by a bank or other party acceptable to the Provider;

(iv) an undertaking in favor of the Provider issued on terms and by an insurance underwriter acceptable to the Provider; or

(v) such other form of security, or Credit arrangement, and on such terms as may be agreed between the Provider and the Client.

The amount of such security shall be agreed by the parties at the time as appropriate to the circumstances, and shall be increased as required by the Provider.

4.6 Nothing herein shall be read to oblige the Provider to continue to deploy Response Resources when it has not been paid or provided with acceptable security for services rendered or services to be rendered.

5. **RESPONSE PROCEDURE**

5.1 The Client may initiate a request for the deployment of Response Resources for Response Activities by a direct telephone call to the Provider at 1-(800) 899-4672 or (369) 224-9141, and such telephone call shall be deemed a request for the deployment of Response Resources by the Client for purposes of this Agreement.

5.2 The person initiating Response Activities on behalf of the Client shall provide information to the Provider as indicated in the

Provider's Instructions to Clients. This information shall include:

(a) the name of the Client;
(b) the caller's name and title;
(c) the name and location of the Facility;
(d) the location of the spill including geographic coordinates;
(e) the nature and estimated quantity of the Oil discharged;
(f) the approximate time of the incident;
(g) the weather conditions on the scene and forecasted weather conditions, if known;
(h) the condition of the Facility;
(I) the name of the Qualified Individual and Federal On-Scene Coordinator (OSC), if known;
(j) the Response Resources required to be deployed at that time.

5.3 The Client shall be responsible to notify governmental authorities as required by Federal Law or State Law of the Discharge. The Provider, however, is not precluded from notifying governmental authorities if deemed appropriate.

5.4 Upon receipt of the request for the deployment of Response Resources by the Client, the Provider shall use Best Endeavors to deploy such Response Resources in accordance with response time requirements specified under Federal law and State Law. Upon the Provider's arrival at the scene of the Discharge, the Qualified Individual, or other authorized representative of the Client, shall give the Provider written authorization to proceed with deployment of Response Resources. The Provider thereafter shall continue to act in accordance with the instructions of the Qualified Individual, or other authorized representative of the Client, subject to the terms of this Agreement.

5.5 The Client shall give the Qualified Individual, or other authorized representative on scene, full authority to approve the daily worksheets submitted by the Provider documenting personnel, equipment, materials and services.

6. LIMITATIONS ON PROVIDER'S OBLIGATIONS

In the event the Provider is requested to deploy Response Resources for Response Activities for more than one Discharge within the Area of Service, the Provider and Client shall make good faith efforts to agree on allocation of Response Resources between the spills. In the absence of such agreement, the Provider shall allocate its Response Resources as directed by the on scene commanders (OSCs) for the concurrent spills. In the absence of such direction the Provider shall not be obligated to remove or divert Response Resources from Response Activities in connection with another spill initiated prior to the request for deployment of Response Resources by the Client if the Provider deems that such Response Resources are necessary for proper completion of the previously initiated Response Activities. The Provider shall give notice to the Client if it will be unable to respond due to deployment of Response Resources for a discharge by another client.

7. DISCLAIMERS AND LIABILITY

7.1 THERE ARE NO WARRANTIES, INCLUDING A WARRANTY OF WORKMANLIKE SERVICE, WHICH EXTEND BEYOND THOSE EXPRESSLY SPECIFIED IN THIS AGREEMENT. Provider warrants that it shall perform the services in accordance with Federal Law and State Law.

7.2 The Client acknowledges that Response Resources deployed by the Provider under this Agreement will be deployed on an emergency basis and that the purpose of Response Activities for which such Response Resources will be deployed is to remove, to the maximum extent practicable, Oil from a Discharge. The Provider does not warrant, by the terms of this Agreement or by undertaking, that Response Activities conducted with Response Resources will render the scene of the Discharge, or areas affected by the Discharge, safe for any form of human activity, or in compliance with any Federal law or State Law.

7.3 In no event shall the Provider, its affiliates, agents, employees or subcontractors be liable for or obliged in any manner for any loss of profits and loss of use to the Client.

7.4 The Provider, its affiliates, agents, directors, officers, employees or subcontractors shall be entitled to the protection of Responder Immunity Law and nothing herein shall be construed to allow the Client to recover by way of contribution, indemnity or otherwise from the Provider, its affiliates, agents, directors, officers employees or subcontractors, any amounts for which the Client is liable to or has paid to third parties and for which the Provider, its affiliates, agents, directors, officers, employees or subcontractors would have no liability under the Responder Immunity Law applicable in the jurisdiction where the Discharge and/or Response Activities have occurred. In no event shall the Provider, its affiliates, agents, directors, officers, employees or subcontractors be liable for or obliged in any manner for damages suffered by the Client arising from services hereunder whether damages to third parties or the Client directly, unless the damages were directly caused by the gross negligence or willful misconduct of the Provider, its affiliates, agents, directors, officers, employees or subcontractors.

7.5 At no time shall the Provider be considered to have title to, or otherwise own, any Oil in the Facility or being removed from the water, shoreline or elsewhere, or to be in possession or control of any such Oil or Hazardous Substances.

8. INSURANCE

8.1 The Provider and its subcontractors shall, at their own cost and expense, procure and maintain in effect during the term of this Agreement pursuant to the attached Exhibit A, Minimum Insurance Requirements.

8.2 The Client shall be responsible for maintaining its own liability insurance.

9. INDEMNIFICATION

9.1 The Provider agrees to indemnify, defend and hold harmless the Client from and against any and all costs, liabilities, claims, demands and causes of action which the Client may suffer, incur, or pay out to the extent caused by the gross negligence or willful misconduct of the Provider, its affiliates, officers, directors, employees or subcontractors except to the extent that such liabilities, claims, demands and causes of action occur as a result of the Client's failure to observe or comply with any applicable law, regulation or lawful authority, or its failure to observe or comply with and fulfill its obligations under this Agreement or as a result of the grossly negligent or wrongful acts of the Client, its employees or agents, or of third parties.

9.2 (a) The Client shall indemnify, defend and hold harmless the Provider, its affiliates, directors, officers, employees, agents and subcontractors from and against any and all costs, liabilities, claims, demands and causes of action to the extent caused by the Client's failure to observe or comply with any applicable law, regulation or lawful authority, or its failure to observe or comply with and fulfill its obligations under this Agreement or as a result of the gross negligence or willful misconduct of the Client, its employees or agents, except to the extent that such liabilities, claims, demands or causes of action occur as a result of the gross negligence or willful misconduct of the Provider, its affiliates, officers, directors, employees or subcontractors;

(b) Notwithstanding Clause 9.2(a), the Client shall indemnify, defend and hold harmless the Provider, its affiliates, directors, officers, employees, agents and subcontractors from and against any and all costs, liabilities, claims demands and causes of action for Removal Costs and damages under OPA §1002 or corresponding State Law which result from actions taken or omitted to be taken in the course of rendering care, assistance or advice in connection with a Discharge or threatened Discharge from a Facility consistent with the National Contingency Plan or as otherwise directed by the Client, the U.S. Coast Guard, the U.S. Environmental Protection Agency or other governmental authorities, which the Provider, its affiliates, directors, officers, employees, agents and subcontractors, individually or collectively, may suffer, incur, or pay out, except to the extent that:

(i) the Provider, its affiliates, officers, directors, employees or subcontractors is entitled to immunity from liability under Responder Immunity Law;

(ii) such liabilities, claims, demands and causes of action arise out of the gross negligence or willful misconduct of the Provider, its affiliates, officers, directors, employees or subcontractors;

(iii) the Client would have been entitled to a complete defense to liability under Federal Law and any relevant State Law had such claim, demand or cause of

action been made against the Client or the Facility directly.

(iv) such payment or indemnification would result in a payment by the Client in excess of the amount to which the Client would have been entitled to limit its liability under Federal Law and any relevant State Law had such claim, demand or cause of action been made against the Client or the Facility directly.

(v) such liabilities, claims, demands and causes of action arise in respect of death or personal injury.

10. **EXCUSE OF PERFORMANCE**

10.1 The performance of this Agreement, except for the payment of money for services already rendered and such further services as are necessary for standby or to demobilize following suspension, may be suspended by either party in the event performance of this Agreement is prevented by a cause or causes beyond the reasonable control of either party or force majeure and not contemplated as a circumstance in which services hereunder are to be performed. Such causes shall include, but not be limited to, acts of God, acts of public enemies, war, rebellion, sabotage, riot, fire, explosion, unavoidable accident, or flood; Governmental laws, regulations, requirements, orders or actions; national defense requirements, injunctions or restraining orders, labor trouble, strike, lockout or injunction. In such event, the parties agree to use their Best Endeavors to eliminate the above referenced causes (provided that neither party shall be required to settle a labor dispute against its own best judgment).

10.2 The party asserting a right to suspend performance under this Agreement must, within a reasonable time after it has knowledge of the effective cause, notify the other party of the cause for suspension, the performance suspended, and the anticipated duration of suspension. Upon receipt of such notice advising of a material or indefinite suspension of performance, and if such suspension substantially impairs the value of this Agreement to it, either party may terminate this Agreement on the number of days written notice set forth in Schedule 1.

10.3 The party asserting a right to suspend performance hereunder shall advise the other party when the suspending event has ended, and when performance will be resumed.

10.4 Nothing herein shall be construed to oblige the Provider to deploy Response Resources in connection with Response Activities where, in the good faith judgment of the Provider's supervisory personnel on the scene and with the agreement of the Federal On Scene Coordinator, circumstances in which the Response Activities are to be conducted present an unreasonable risk to life or property.

11. **TERMINATION**

11.1 If the Provider is unable, for a period of more than thirty (30) days, to obtain or maintain Classification as an Oil Spill Removal Organization when such Classification is available, this Agreement

may be terminated upon notice from the Client. In such event the Provider shall pay to the Client in a form of liquidated damages an amount equal to the prorated portion of the Annual Retainer Fee.

11.2 This Agreement may be terminated by the Provider upon forty-eight (48) hours notice to the Client in the event of the following:

(a) with respect to a Facility or Facilities, when the Client has failed to provide the Provider with proof of insurance;

(b) when the Client is not current with payment of any fees or charges under this Agreement.

11.3 In the event of termination, the Client shall compensate the Provider for all services performed prior to termination and for such post-termination efforts as are reasonably related to the services such as demobilization and storage and disposal of recovered Oil.

11.4 Should the Client default in the performance of its obligations under this Agreement, or cease doing business as a going concern, become insolvent, commit an act of bankruptcy, or become the subject of any proceeding under the Bankruptcy Act or other insolvency laws, or be seized or nationalized by a government or government instrumentality, then the Provider may, without notice and without relieving the Client of its obligations hereunder, terminate this Agreement, declare the balance of fees and charges to be due and payable, and assert maritime or other liens against the Facility.

11.5 Should the Provider default in the performance of its obligations under the Agreement, or cease doing business as a going concern, become insolvent, or commit an act of bankruptcy, or become the subject of any proceeding under the Bankruptcy Act or other insolvency laws, or be seized or nationalized by a government or government instrumentality, then the Client may terminate this Agreement

12. CONFIDENTIALITY

12.1 The Provider and the Client (including both party's principals, employees, officers, directors, and agents) shall treat as confidential and proprietary and not disclose to others during or subsequent to the term of this Agreement, except as is necessary to perform this Agreement (and then only on a confidential basis satisfactory to both parties), any confidential information whether verbal or written, or any description whatsoever (including any technical information, experience or data) regarding the terms of this Agreement or the Provider's Response Resources and Contractors without, in each instance, securing the prior written consent of the other party, unless such information is already in the public domain or has been disclosed by another third party through no fault of the parties to the Agreement. Provider and Client agree that the other may disclose that the Client has contracted with the Provider.

12.2 In the event that either party shall be required by subpoena, court, or administrative order (hereinafter "The Order") to disclose any of the information deemed by this Agreement to be confidential and/or proprietary, that party shall give immediate written notice to the other party. Upon receipt of same, the party whose information may be the subject of The Order expressly reserves the right to interpose all objections it may have to the disclosure of its information. The foregoing shall survive the termination of expiration of this Agreement and shall continue until a specific written release is given by either party.

13. NON-ASSIGNMENT

Except to the extent of the Provider's right to subcontract for Response Resources and other services hereunder, this Agreement is personal to the parties, and neither rights nor obligations may be assigned by either party without the prior written consent of the other party.

14. TERM

This Agreement shall continue in full force and effect for the period of years as indicated on Schedule 1 and for successive periods of one year thereafter unless terminated by either party upon notice to the other party ninety (90) days or more before the next renewal date.

15. WAIVER

Any waiver by either party of any provision or condition of this Agreement shall not be construed or deemed to be a waiver of any other provision or condition of this Agreement, nor a waiver of a subsequent breach of the same provision or condition, unless such waiver be expressed in writing and signed by the party to be bound.

16. SEVERABILITY

If any section, subsection, clause or sentence of this Agreement shall be deemed illegal, invalid or unenforceable under any applicable law actually applied by any court of competent jurisdiction, such illegality, invalidity or unenforceability shall not affect the legality, validity and enforceability of this Agreement or any other section, subsection, clause or sentence thereof. Where, however, the provisions of any applicable law may be waived, they are hereby waived by the parties to the full extent permitted by such law to the end that this Agreement shall be a valid and binding agreement enforceable in accordance with its terms.

17. GOVERNING LAW AND JURISDICTION

17.1 This Agreement shall be governed by and construed in all respects in accordance with the law of the State of New York except to the extent that this Agreement entitles the Provider to the benefit of Responder Immunity Law applicable in the jurisdiction where the services are rendered in which case the Responder Immunity Law shall govern only the issue of the Provider's liability.

17.2 (a) In relation to any dispute arising out of or in relation to this Agreement, each of the Provider and the Client hereby irrevocably and unconditionally submits itself to the

jurisdiction of the 4th Judicial District Court of the State of Oregon, Multnomah County, the United States District Court for the Oregon, Portland Division, and any other court of competent jurisdiction within the City of Portland, Oregon. Such courts within the City of Portland, Oregon shall have exclusive jurisdiction with relation to any dispute arising out of or in connection with this Agreement and for the benefit of the Client.

(b) Each of the Provider and the Client hereby consents to service of process in any suit, action or other proceeding arising out of or in relation to this Agreement in such court within the City of Portland, Oregon, and agrees that service by mail shall constitute valid service upon the Provider and/or Client.

(c) Nothing in this Clause shall affect the right of the Provider to serve process in any manner permitted by law, or limit the right of the Provider to take proceedings with respect to this Agreement against the Client in any jurisdiction. Nor shall the taking of any proceedings with respect to this Agreement in any jurisdiction preclude the Provider from taking proceedings with respect to this Agreement in any other jurisdiction, whether concurrently or not.

(d) The Provider may claim execution of any judgment or order in any court of appropriate authority of any state or country where the Client has any assets.

18. MISCELLANEOUS

18.1 This Agreement and the Schedules to this Agreement represent the entire understanding and agreement between the Provider and the Client and supersede any and all prior agreements, whether written or oral, that may exist between the Provider and the Client regarding same. No terms, conditions, prior course of dealings, course of performance, usage or trade, understandings, purchase orders or agreements purporting to modify, vary, supplement or explain a provision of this Agreement shall be effective unless set forth in writing and signed by representatives of each party authorized to amend this Agreement.

18.2 None of the provisions of this Agreement shall be deemed to constitute a partnership or joint venture between the parties for any purpose.

18.3 The Provider shall not be restricted (whether as Provider, agent, owner, operator, charterer or otherwise) from carrying on or being concerned or interested in any business or activity which is or may be similar to or competitive with the business or activities now or at any time hereafter carried on by the Client.

19. NOTICES

19.1 Unless otherwise expressly provided herein, all notices, requests, demands, consents or other communications to or upon the parties under or pursuant to this Agreement shall:

(a) be in English and in writing;

(b) be deemed to have been duly given or made if it is:

(i) delivered by hand by a third party at the address of the relevant party set out below (or at such other address as the relevant party may hereafter specify to the other party) on the day of delivery; or

(ii) sent to the fax number of the relevant party set out herein, or to such other number as either party may hereafter specify to the other party, when sent.

19.2 For the purpose of this Clause, all notices, requests, demands or other communications shall be given or made by being addressed as follows:

Provider:
National Response Corporation
c/o NRC Environmental Services Inc.
9520 10th Ave. S., Suite 150
Seattle, WA 98108
Attn: Stephanie Barton
Phone: 206-730-3993
Fax: 206-607-3001
Email: sbarton@nrces.com

Local Contact:
NRC Environmental Services Inc.
720 N. California, Suite E
Pasco, WA 99301
Attn: Junior Mendoza
Phone: 509-545-6110; (b) (6) (cell)
Fax: 509-547-6128
Email: jmendoza@nrcc.com

Client:
Tidewater Terminal Co.
6305 NW Old Lower River Rd.
Vancouver, WA 98660
Attn: William H. (Bill) Collins, Director
Environmental, Health, Safety & Security
Phone: 360-759-0306; (b) (6) (cell)
Fax: 360-694-8981
Email: Bill.Collins@tidewater.com

20. WARRANTY OF AUTHORITY

The Client hereby warrants that it has full authority to act on behalf of its principals with respect to the Facilities listed on Schedule 1 in respect of the matters addressed herein. The Client agrees to provide, if requested by the Provider, written confirmation of such authority.

21. ADDITIONAL FACILITIES

Additional Client Facilities may be added to the Agreement with signed written amendment to Schedules 1 and 3.

IN WITNESS whereof the parties have duly executed this Agreement as of the date first written above.

Stephanie Barton

Name: Stephanie Barton
Position: Director, ER Programs
For and on behalf of
NATIONAL RESPONSE CORPORATION

Name: Dennis McVicker
Position: President/CEO
For and on behalf of
TIDEWATER TERMINAL CO.

SCHEDULES

1. Description of Client Capacity and Facility
2. Description of Area of Service
3. Basic Compensation
4. Additional Compensation
5. Wildlife MRU Equipment Services

Exhibit A, Minimum Insurance Requirements

SCHEDULE 1

Client: Name: Tidewater Terminal Co.

Type of entity: Corporation

Existing under law of: Oregon

Principal office: 6305 NW Old Lower River Rd.
Vancouver, WA 98660

Capacity in which acting: Owner

If acting as agent,
name(s) of principal(s):

Description of Client Facilities and Capacities:

Pasco Pipeline:

Snake River-Pasco BN Pipeline System includes a single pipeline segment in the state of Washington, approximately 4 miles in length, with total capacity of 280 bbls, transferring diesel from the Tidewater Terminal to the Burlington Northern Railyard Associated.

Umatilla Pipeline:

Umatilla Pipeline System includes a single pipeline segment in the state of Oregon, approximately 10 miles in length, with total capacity of 240 bbls, transferring diesel from the Tidewater Umatilla Terminal tank farm to the Union Pacific Hinkle Rail Yard in Hermiston, OR.

Terms of Agreement:

Commencing: September 28, 2012

Term: Agreement automatically renews annually unless terminated in writing by either party 90 days prior to renewal date.

Days notice for termination (Clause 10.2): 90

Waiver of Clause 4.5(a) granted.

SCHEDULE 2

Description of Services Area

Areas impacted by spills from covered Client Facilities.

SCHEDULE 3

Basic Compensation

Annual Retainer Fee:

The annual retainer for coverage of above facilities is:

Pasco Pipeline: $17,750, including Wildlife MRU Equipment Services
Umatilla Pipeline: $17,500, including Wildlife MRU Equipment Services

Annual West Coast CPI increase applies to subsequent annual fees.

Invoice Schedule:

Annual Retainer Fee will be invoiced as follows:

Annually in advance

Payment Terms:
Payments are due upon receipt of invoice.

Finance Charge of 1 ½ % per month, or maximum allowed by law, whichever is less, will be charged on all accounts not paid within 10 days of receipt.

SCHEDULE 4

Additional Compensation

Additional Compensation will be according to the most current NRCES West Coast Price List (current Price List at commencement date attached herewith). Annual Price List updates are effective February 18th.

Payment terms are as follows:

Payments are due Net 10 after receipt of invoice.

Finance Charge of 1 ½ % per month, or maximum allowed by law, whichever is less, will be charged on all past due accounts.

SCHEDULE 5

Wildlife MRU Equipment Services

Provider shall maintain a Wildlife Mobile Response Unit Equipment (Wildlife MRU Equipment) capability as described in the NRC Primary Response Provider (PRC) Application update submitted to the Washington State Department of Ecology dated May 14, 2010 and which has been determined by the Washington State Department of Fish and Wildlife (WDFW) as sufficient to support the rehabilitation of 100 birds. Provider shall also conduct an annual drill such that substantially all of Wildlife MRU Equipment is deployed at least once every three (3) years.

Client is authorized to reference the Wildlife MRU Equipment and Provider annual drills of the Wildlife MRU Equipment for the purposes of meeting state and/or federal contingency planning requirements for access to wildlife rescue and rehabilitation equipment capabilities for the following covered facilities.

Pasco Pipeline
Umatilla Pipeline

Any requirements not met by the Wildlife MRU Equipment and the annual drills shall be the sole responsibility of Client to provide. Provider is not responsible to provide, supervise, direct or control any personnel using and operating the Equipment to provide wildlife rehabilitation services.

Client shall pay Provider on a time and materials basis for requested deployment of Wildlife MRU Equipment, including any associated personnel, equipment and materials, in accordance with the terms and rates set forth the Agreement.

Client acknowledges that the planning requirements for wildlife rehabilitation are governed by the regulations, guidelines and other requirements of various government agencies with jurisdiction over such wildlife rehabilitation. To the extent any of these governmental requirements change the requirements of the equipment needed to meet the regulations, Provider may, at its sole discretion, endeavor to meet the new requirements subject to its right to negotiate with Client a Capital Buy-in Fee and Annual Operating Fees for the Wildlife MRU Equipment changes necessitated by such regulations or government agencies pursuant to the terms of the Agreement.

Exhibit A
Minimum Insurance Requirements

With respect to Provider's performance under the Agreement, and in addition to Provider's obligations of indemnification thereunder, Provider, which for purposes of meeting insurance shall mean either for shall mean National Response Corporation or its wholly owned subsidiary NRC Environmental Services Inc., shall, at its sole cost and expense, obtain and maintain the following insurance policies, limits which can be met through a combination of primary and excess policies:

Policy	Limits	Coverage
Workers' Compensation	Amount required by Law in each state where Provider conducts operations.	
Stop Gap Employers Liability	$500,000 (each accident or disease)	Required in all states where Workers' Compensation insurance is a monopolistic state-run system.
Employer's Liability	• $500,000 for bodily injury (each accident) • $500,000 for bodily injury by disease (policy limits) • $500,000 for bodily injury by disease (each employee)	
Commercial General Liability	• $2,000,000 general aggregate limit • $1,000,000 each occurrence limit (bodily injury/property damage) • $1,000,000 each occurrence limit (personal injury and advertising injury) • $2,000,000 aggregate limit (products/completed operations) • $1,000,000 each occurrence limit (products/completed operations) • $1,000,000 each occurrence limit (fire legal liability)	Must be written on Insurance Services Office (ISO) Form CG 00 01 12 04 or a substitute form providing equivalent coverage, covering liability arising from premises, operations, personal injury, advertising injury, products/completed operations, and liability assumed under an insured contract (including tort liability of a third party assumed in a business contract).
Business Automobile Liability	$1,000,000 combined single limit (bodily injury/property damage)	Must include coverage for all owned, non-owned and hired vehicles.
Protection & Indemnity (P&I)	$5,000,000 any one accident or occurrence	
Umbrella/Excess Liability	$10,000,000 each occurrence limit	Must include terms at least as broad as the underlying Employer's Liability, Commercial General Liability and Business Automobile Liability

The Workers' Compensation, Commercial General Liability and Business Automobile Liability policies will, to the fullest extent allowable by law, include a waiver of subrogation in favor of Client, its Affiliates, and each of their respective officers, directors, employees and borrowed servants, to the extent of Provider's obligation and liability under the Agreement. The Commercial General Liability policy will (i) include Client, its Affiliates, and each of their respective officers, directors, employees and borrowed servants as additional insureds (collectively, the "Client

Insured Group") to the extent of Provider's obligation and liability under the Agreement.; and (ii) be primary and non-contributory with respect to any insurance or self-insurance maintained by Client. Any additional insured endorsement may be either specific to the Client Insured Group or "blanket" or "automatic" (i.e., addressing any person or entity), as required by contract. Provider shall provide a copy of the additional insured endorsement to Client within 60 days of the date of execution of this Agreement and within 60 days of each policy renewal.

Provider covenants and agrees to:

(A) maintain the insurance coverages and limits required hereby and any additional insurance and/or bonds required by law (i) at all times during the term of this Agreement and until completion of all services associated with this Agreement, whichever is later; and (ii) with respect to any coverage maintained in a "claims-made" policy, for two (2) years following termination of this Agreement or completion of all services associated with this Agreement, whichever is later; provided that, if a "claims-made" policy is maintained, the retroactive date must precede the date of commencement of services under any Release pursuant to this Agreement;

(B) require each Subcontractor who may perform Work under this Agreement or enter upon the Work site to maintain coverages, requirements, and limits at least as broad as those listed in this Exhibit A (excluding any Umbrella/Excess Liability requirements and limiting P&I requirement to $1 million) from the time when the Subcontractor begins Work, throughout the term of the Subcontractor's Work and, with respect to any coverage maintained on a "claims-made" policy, for two (2) years following completion of Subcontractor's Work;

(C) procure the required insurance from an insurance company eligible to do business in the state or states where services will be performed and having and maintaining a Financial Strength Rating of "A-" or better and a Financial Size Category of "VII" or better, as rated in the A.M. Best Key Rating Guide for Property and Casualty Insurance Companies; provided, however, with respect to Workers' Compensation insurance, Provider may procure such insurance from the state fund of the state where services are to be performed; and

(D) deliver to Client certificates of insurance stating the types of insurance and policy limits, and further provide, or cause the issuing insurance company to provide, at least 30 days prior written notice to Client of any cancellation, non-renewal, or reduction in coverage, terms, or limits. Provider shall deliver such certificates (i) prior to execution of this Agreement and prior to commencement of any services; (ii) prior to expiration of any insurance policy required under this Agreement; and (iii) for any coverage maintained on a "claims-made" policy, for two (2) years following the termination of this Agreement or completion of all services associated with this Agreement, whichever is later.

Client and Provider further covenant and agree that (i) the failure of Client to demand such certificate of insurance or failure of Client to identify a deficiency therein will not be construed as a waiver of Provider's obligation to maintain the insurance required under this Agreement; (ii) the insurance required under this Agreement does not represent that coverage and limits will necessarily be adequate to protect Provider, nor be deemed as a limitation of Provider's liability to Client in this Agreement; (iii) Provider may meet the required insurance coverages and limits with any combination of primary and umbrella/excess liability insurance; and (iv) Provider is solely responsible for any deductible or self-insured retention.

NRC Environmental Services

Equipment List
Pasco, Spokane, Seattle, and Portland Yards

NRC Environmental Services - Pasco & Spokane Equipment

Pasco Yard – 720 N. California, Suite A, Pasco, WA 99301
509-545-6110

Spokane Yard - 4031 East Trent, Spokane, WA 99202
509-536-5960

Portland OR - 6211 North Ensign, Portland, OR 97217
503-283-1150

Seattle WA - 20500 Richmond Beach Dr. NW , Seattle, WA 98177
206-546-7150

RESPONSE PERSONNEL	DESCRIPTION	QUANTITY	LOCATION
	Full Time Responders	12	Portland
		58	Seattle
		12	Spokane
		4	Pasco
	Standby Responders	20	Portland
		100	Seattle

PASCO YARD

AIR MONITORING EQUIPMENT	DESCRIPTION
Meters	Industrial Scientific I-Brid MX-6 (LEL/ O2/ H2S/ CO)
	Draeger CMS Meter Variety of Chips Including Benezene/ H2S

IDENTIFICATION	DESCRIPTION	QUANTITY	LOCATION
	Emergency response truck		Pasco Yard
	Gear trucks		Pasco Yard
	Air mover truck		Pasco Yard
	70 bbl liquid vacuum truck		Pasco Yard
1104	Flatbed	1	Pasco Yard
1209	F-350 4x4 Crewcab PU	1	Pasco Yard
6015	Boston Whaler 21'	1	Pasco Yard
6062	Boston Whaler Trailer	1	Pasco Yard
3196	20' Boom Trailer	1	Pasco Yard
	Kepner Boom	1,000 ft	Pasco Yard
5048	Trailer Mounted Pressure Washer	1	Pasco Yard
2092	2004 Sterling high-rail Supersucker	1	Pasco Yard

	12' Lund Skiff -ZULAB2921001	1	Pasco Yard
	8HP 4 stroke Yamaha Outboard Motor	1	Pasco Yard
	Anchor Systems	4	Pasco Yard

SPOKANE YARD

BOAT	SKIFF	1	Spokane Yard
BOOM - POND	POND BOOM	500ft	Spokane Yard
GENERATOR	HONDA EB3000	1	Spokane Yard
OUTBOARD MOTOR	8 HP OUTBOARD	1	Spokane Yard
PORTABLE TANKS	500 GAL TANK-TRAILER 6449	1	Spokane Yard
PRESSURE WASHER	RIDGID PRESSURE WASHER	1	Spokane Yard
PUMPS	2" TRASH - DIESEL	1	Spokane Yard
PUMPS	HONDA WP 20X	1	Spokane Yard
PUMPS	PLASTIC SIPHON	2	Spokane Yard
PUMPS	WILDEN M-8 ALUMINUM	2	Spokane Yard
PUMPS	WILDEN WILFLOW CHEMICAL	1	Spokane Yard
SCBA PACKS	SCBA PACK	4	Spokane Yard
TRAILER - SMALL	98 PACEA\SPOKANE	1	Spokane Yard
TRUCK	82 MACK-DUMP TRUCK	1	Spokane Yard
TRUCK	97 F-250 PICK UP	1	Spokane Yard
TRUCK	00 F-450	1	Spokane Yard
TRUCK	02 F-350	1	Spokane Yard
TRUCK	F-450 FLATBED	1	Spokane Yard
TRUCK	O5 F-150 SUPER CAB	1	Spokane Yard
TRUCK	04 F350	1	Spokane Yard
TRUCK	06 F-450	1	Spokane Yard
TRUCK	06 PETERBUILT DUMP AND PUP	1	Spokane Yard
TRUCK	06 PETERBUILT DUMP AND PUP	1	Spokane Yard
TRUCK	HIGHRAIL SUPERSUCKER 06	1	Spokane Yard
TRUCK	07 STERLING SUPERSUCKER	1	Spokane Yard
TRUCK	92 BIG TEX TRAILER	1	Spokane Yard
TRAILER	97 53' FLATBED TRAILER	1	Spokane Yard
TRAILER	92 EAGER BEAVER	1	Spokane Yard
ATV	HONDA TRX 450FE	1	Spokane Yard
	160 EXCAVATOR	1	Spokane Yard
	120 EXCAVATOR	1	Spokane Yard
	TRACTOR AND 120 BBL VACUUM TRUCK	1	Spokane Yard
	EMERGENCY RESPONSE TRAILER	1	Spokane Yard

NRC ENVIRONMENTAL SERVICES

Puget Sound Resources

Total Containment Boom (ft)	49,200
Total Response Vessels	10
Total Support Vessels	14
Total Skimmer Recovery BPD	95,290
Total Vacuum Truck Recovery BPD	5,145
Total Vacuum Truck Storage BBL	740
Total Tank Storage BBL	110,128

Revised 02/07/2006

NRC Environmental Resources
Puget Sound COTP Zone

Containment Boom

ID#	Identification	Specification	Boom Length	Storage	Home Base	Maintained	Inland/Ocean	Date Acquired
6278	ExpBoom 12x18	Versatek	1,000	FRV#3	Aberdeen	Use/Yearly	Inland	
6278	ExpBoom 12x18	Versatek	4,000	Spill Trailer	Aberdeen, Port	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	20' Container	Anacortes	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	32' FRV	Anacortes	Use/Yearly	Inland	11/1/1991
	Boom 8x12	Kepner	1,000	FRV #6	Bellingham	Use/Monthly	Inland	
	Boom 8x12	Kepner	3,000	Container 3067	Bellingham, pier	Use/Yearly	Inland	9/1/1992
6278	ExpBoom 12x18	Versatek	1,000	10' Container	Bellingham, pier	Use/Yearly	Inland	
6278	ExpBoom 12x18	Versatek	1,000	Wood Box	Bellingham, pier	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	FRV #1	Everett	Use/Yearly	Inland	10/1/1991
	Boom 42"	42" inch Inflatable Abasco	1,500	box trailers #507	Neah Bay	Use/Yearly	Ocean	
	Boom 42"	42" inch Inflatable Abasco	1,500	box trailers #508	Neah Bay	Use/Yearly	Ocean	
	Boom 42"	42" inch Inflatable Abasco	1,000	OSRV Cape Flattery	Neah Bay	Use/Yearly	Ocean	
	Boom 8x12	Kepner	2,400	Spill Box	Neah Bay	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	Spill Box	Olympia	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	FRV #4	Port Angeles	Use/Yearly	Inland	10/1/1991
	Boom 8x12	Kepner	2,000	Trailer	Port Angeles	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	20' Container	Port Townsend	Use/Yearly	Inland	
	Boom 8x12		1,000	DMC-10	Puget Sound		Inland	
	Boom 8x12		800	FOSS 185-P2	Puget Sound		Inland	
	Boom 8x12		1,000	FOSS 248-P2	Puget Sound		Inland	
	Boom 8x12		1,000	WASHINGTON	Puget Sound		Inland	
	Boom 8x12		1,000	FOSS 266	Puget Sound		Inland	
	Boom 12	Kepner	1,000	Vessel Service #1	Seattle, E ST	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	Spill Box	Seattle, Eagle Harbor	Use/Yearly	Inland	
	Boom 8x12	Am. Marine	1,000	Spill Box	Seattle, M-T	Use/Yearly	Inland	
	Boom 8x12	Kepner	1,000	FRV #9	Seattle, P-90	Use/Yearly	Inland	12/1/1991
	Boom 8x12	Kepner	3,000	Container on chassis #3073	Seattle, Pt Wells	Use/Yearly	Inland	5/1/1996
	Boom 8x12	Kepner	1,000	Trailer #3053	Seattle, Pt Wells	Use/Yearly	Inland	5/1/1996
	Boom 8x12	Kepner	1,000	100' Bundles, on file 20' container	Seattle, Pt Wells	Use/Yearly	Inland	
	Boom, 42", ocean	Kepner	1,000	Container #3070	Seattle, Pt Wells	Use/Yearly	Ocean	
6278	ExpBoom 12x18	Westlake	1,000	Container #3086	Seattle, Pt Wells	Use/Yearly	Inland	9/1/1991
6278	ExpBoom 12x18	Vesramk	200	Container #3078	Seattle, Pt Wells	Use/Yearly	Inland	
6278	ExpBoom 12x18	Versatek	3,000	20' Container	Seattle, Pt Wells	Use/Yearly	Inland	
6278	ExpBoom 12x18	Versatek	1,000	FRV #2	Sidou	Use/Yearly	Inland	9/1/1991
	Boom 8x12	Kepner	1,000	FRV #7	Tacoma, FMC	Use/Yearly	Inland	
	Boom 8x12	Kepner	2,000	Container #3080	Tacoma, Tote	Use/Yearly	Inland	9/1/1991
	Boom 12x18	Exp Boom	1,000	Beaver	West Port	Use/Yearly	Inland	

Total Boom (ft)	49,200

Vessels

ID#	Identification	Specification	Capacity/Speed	Storage	Home Base	Maintained	Inland/Ocean	Date Acquired
6042	Response Vessel 32'	Kvichak FRV #3	30knts	Moorage	Aberdeen	Use/Monthly	Ocean	9/1/1991
8214	Workboat 16'	Al Nasken	20knts	Spill Box	Aberdeen	Use/Monthly	Inland	6/1/1995
6053	Response Vessel 32'	Kvichak FRV #8	30knts	Moorage	Anacortes	Use/Monthly	Ocean	11/1/1991
8013	Workboat 17'	Lund, aluminum			Bellingham, pier	Use/Monthly	Inland	12/1/1992
6049	Response Vessel 32'	Kvichak FRV #6	30knts	Moorage	Bellingham, Port	Use/Monthly	Ocean	10/1/1991
6047	Response Vessel 32'	Kvichak FRV #5	30knts	Moorage	Everett	Use/Monthly	Ocean	10/1/1991
6045	Response Vessel 32'	Kvichak FRV #4	30knts	Moorage	Port Angeles	Use/Monthly	Ocean	10/1/1991
6771	ServiceVessel 32'	Kvichak 32'		Moorage	Seattle, E ST	Quarterly	Ocean	6/1/1999
8199	Skiff	Lund 12'	15knts	Vehicle	Seattle, E ST	Quarterly	Inland	
6055	Response Vessel 32'	Kvichak FRV #9	30knts	Moorage	Seattle, P-90	Use/Monthly	Ocean	12/1/1991
	Skiff	Lund 12'	15knts	Moorage	Seattle, P-90	Quarterly	Inland	
	Workboat	25', Boston Whaler	25knts	Moorage	Seattle, Pier 90	Use/Monthly	Inland	2003
8200	P	Lund 12'	15knts	Yard	Seattle, Pt Wells	Quarterly	Inland	9/1/1996
8204	Response Vessel 16'	Robalo		Yard	Seattle, Pt Wells	Use/Quarterly	Inland	
6034	Response Vessel 23'	Munson Pacman	30knts	Trailer (LCA4609.ns)	Seattle, Pt Wells	Use/Monthly	Ocean	4/1/1995
8318	Skiff	Lund 12'	15knts	Vehicle #7098	Seattle, Pt Wells	Use/Quarterly	Inland	1/1/1996
8196	Skiff	Lund 12'	15knts	Trailer #3098	Seattle, Pt Wells	Quarterly	Inland	5/1/1996
8319	Skiff	Lund 12'	15knts	Trailer, yard	Seattle, Pt Wells	Use/Quarterly	Inland	
8201	Skiff	Lund 12'	15knts	Vehicle #3083	Seattle, Pt Wells	Use/Quarterly	Inland	
8014	Workboat 14'	Auburn		Trailer	Seattle, Pt Wells	Use/Monthly	Inland	
6039	Response Vessel 32'	Kvichak FRV #2	30knts	Moorage	Sidou	Use/Monthly	Ocean	9/1/1991
6051	Response Vessel 32'	Kvichak FRV #7	30knts	Moorage	Tacoma, FMC	Use/Monthly	Ocean	11/1/1991
8019	Skiff	Lund 12'	15knts		Tacoma, FMC	Quarterly	Inland	12/1/1992
6026	Response Vessel 34'	Beaver	30knts	Moorage	West Port	Use/Monthly	Ocean	4/1/1994

Total Response Vessels	10
Total Support Vessels	14

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NRC Environmental Resources

Puget Sound COTP Zone

Skimmers

IDF	Identification	Specification	Recovery BPD	Efficiency	EDRC	Storage	Home Base	Maintained	Inland/Ocean	Date Acquired
6157	Brush Skimmer	Lamor/OPC2	15,096	95%	14,341	Spill Box	Aberdeen	Use/Quarterly		10/1/1991
6154	Disc Skimmer/ Power Pack	Mortis/MI-30	3,432	95%	3,260	Spill Box	Bellingham, pier	Use/Quarterly		9/1/1991
	Drum Skimmer	Aquaguard RBS-40	12139	98%	11,893	OSRV Cape Flattery	Neah Bay	Use/Yearly	Ocean	
	Wier Skimmer	Foilex 150	5,280	20%	1,056	Tote on Barbera Foss	Neah Bay	Use/Quarterly		
6152	Disc Skimmer/ Power Pack	Mortis/MI-30	3,432	95%	3,260	Trailer #5199	Port Angeles	Use/Quarterly		9/1/1991
6156	Wier Skimmer	Desmi 250	15,096	20%	3,019	Spill Box on Chassis	Port Angeles	Use/Quarterly		10/1/1991
	Wier Skimmer	3" Skimpak	1,800	81%	1,458	Spill Box	Port Townsend	Use/Quarterly		
	Brush/Drum Skimmer	Aqua-Guard/RBS-10	3,600	95%	3,420	Vessel Service Boat	Seattle, Evrag ST	Use/Quarterly	Ocean	
	Wier Skimmer	2" Skimpak	888	81%	719	Spill Box	Seattle, P-90	Use/Quarterly		
4084	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4085	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4086	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4087	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4135	Air Conveyors	Vac-U-Max, closed top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4156	Air Conveyors	Vac-U-Max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
4157	Air Conveyors	Vac-U-Max, closed top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
	Air Conveyors, PCB	Vac-U-max, closed top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
nn	Air Conveyors, PCB	Vac-U-max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
nn	Air Conveyors, PCB	Vac-U-max, open top	2,055	20%	411	Warehouse	Seattle, Pt Wells	Use/Annual		
6060	Belt Skimmer Vessel	Marco/IC, #2	4,971	74%	3,678	Trailer #5067	Seattle, Pt Wells	Use/Monthly		4/1/1991
6059	Belt Skimmer Vessel	Marco/IC, #1	4,971	74%	3,678	Trailer #5066	Seattle, Pt Wells	Use/Monthly		4/1/1991
6158	Brush Skimmer	Lamor/OPC2	15,096	95%	14,341	Warehouse	Seattle, Pt Wells	Use/Quarterly		10/1/1991
6375	Brush/Drum Skimmer	Aqua-Guard/RBS-10	3,600	95%	3,420		Seattle, Pt Wells	Use/Quarterly	Ocean	
6385	Brush/Wier Skimmer	Aqua-Guard RBS-10	3,600	95%	3,420	Yard	Seattle, Pt Wells	Use/Quarterly		11/1/1998
	Disc Skimmer head	Vikoma/Kebab 600 E	1,370	20%	274	Warehouse	Seattle, Pt Wells	Use/Quarterly		
	Disc Skimmer head	Vikoma/Kebab 600 E	1,370	20%	274	Warehouse	Seattle, Pt Wells	Use/Quarterly		
6293	Disc Skimmer Power Pack	Vikoma/Kebab 600 E	1,370	20%	274	Warehouse	Seattle, Pt Wells	Use/Quarterly		
	Disc Skimmer Power Pack	Mortis/MI-30	3,432	95%	3,260		Seattle, Pt Wells	Use/Quarterly		
6150	Rope Mop	OMI/MK II-9D	2,055	20%	411	Trailer, Yard	Seattle, Pt Wells	Use/Quarterly		12/1/1992
5052	Rope Mop	OMI/MK II-4VE	480	20%	96	Warehouse	Seattle, Pt Wells	Use/Quarterly		
	Rope Mop	OMI/MK II-4VE	480	20%	96	Warehouse	Seattle, Pt Wells	Use/Quarterly		
	Skimmer	CASCADE-5465	27325	20%	5,465	semi trailer	Seattle, Pt Wells	Use/Yearly	Ocean	
6152	Vacuum Skimmer	Marco/VS50	6,000	20%	1,200	Chassis#3054	Seattle, Pt Wells	Use/Quarterly		4/1/1992
	Wier Skimmer	Mente 3", portable				Warehouse	Seattle, Pt Wells	Use/Quarterly		
6155	Wier Skimmer	Desmi 250	15,096	20%	3,019	Spill Box,chassis #3074	Seattle, Pt Wells	Use/Quarterly		9/1/1991
	Wier Skimmer	Skimpak	888	81%	719	Truck #1012	Seattle, Pt Wells	Use/Quarterly		
	Wier Skimmer	3" Skimpak	1,800	81%	1,458	Warehouse	Seattle, Pt Wells	Use/Quarterly		
6153	Disc Skimmer/ Power Pack	Mortis/MI-30	3,432	95%	3,260	Spill Box	Tacoma, FMC	Use/Quarterly		9/1/1991

Total EDRC BPD	86,290

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NRC Environmental Resources
Puget Sound COTP Zone

Vacuum Trucks

ID#	Identification	Specification	Recovery (BPH)	Efficiency	EDRC	Liquid Storage bbls	Storage	Home Base	Maintained	Date Acquired
3181	Vacuum Trailer	PersVac 120bbl	3,430	20%	686	120	Trailer	Seattle, Pt Wells	Quarterly	11/1/2001
	Vacuum Truck	International 35bbl	3,430	10%	343	35	Vendor/CMC	Seattle	Vendor	
	Vacuum Truck	International 55bbl	3,430	10%	343	50	Vendor/CMC	Seattle	Vendor	
	Vacuum Truck	International 50bbl	3,430	10%	343	55	Vendor/CMC	Seattle	Vendor	
	Vacuum Truck	International 70bbl	3,430	10%	343	70	Vendor/CMC	Seattle	Vendor	
	Vacuum Truck	International 70bbl	3,430	10%	343	70	Vendor/SPR	Seattle	Use/Quarterly	
	Vacuum Truck	White 70bbl	3,430	10%	343	70	Vendor/SPR	Seattle	Use/Quarterly	
	Vacuum Truck	International 60bbl	3,430	10%	343	60	Vendor/SPR	Seattle	Use/Quarterly	
2059	Vacuum Truck	Kenniworth/Thompson T800	3,430	10%	686	70	Vehicle	Seattle, E ST	Quarterly	
2056	Vacuum Truck	Thompson, 70 bbl	3,430	10%	686	70	Vehicle	Seattle, E ST	Use/Weekly	12/30/1998
2054	Vacuum Truck	Thompson, 70 bbl	3,430	10%	686	70	Vehicle	Seattle, E ST	Use/Weekly	10/20/1998

Total EDRC	5,146
Total Liquid Storage BBL	740

Tankage

ID#	Identification	Specification	Each (bbl)	Total (bbl)	Efficiency	Derated	Storage	Home Base	Maintained	Inland/Ocean	Date Acquired
	Bladder Tank	CanSer/OLE-4	25	25	100%	25	Spill Box	Aberdeen	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Aberdeen	Use/Quart	Ocean	
	Bladder Tank	CanSer/OLE-4	25	25	100%	25	Spill Box	Aberdeen	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Aberdeen	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Bellingham, pier	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Bellingham, pier	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Bellingham, pier	Use/Quart	Ocean	
	Bladder Tank	Draccone Canflex	100	100	100%	100	OSRV Cape Flattery	Neah Bay	Use/Yearly	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Neah Bay	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Neah Bay	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank #6	238	238	100%	238	Spill Box	Neah Bay	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Bladder Tank	Collapsible Fabric Tank	238	238	100%	238	Spill Box	Neah Bay		Ocean	
	Tankage	On board tankage	320	320	100%	320	OSRV Cape Flattery	Neah Bay	Use/Yearly	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Port Angeles	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Trailer #3 180	Port Angeles	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank #2	238	238	100%	238	Spill Box	Port Angeles	Use/Quart	Ocean	
D622241	Barge Tankage	Foss 185-P3, 185x50x12	11,900	11,900	50%	5,950	Moorage	Puget Sound	Per ABS	Ocean	
D575543	Barge Tankage	Foss 289	45,500	45,500	50%	22,750	Moorage	Puget Sound	Per ABS	Ocean	
D662953	Barge Tankage	BMC-10	14,999	14,999	50%	7,499	Moorage	Puget Sound	Per ABS	Ocean	
D663750	Barge Tankage	Foss 248-P3	26,100	26,100	50%	13,050	Moorage	Puget Sound	Per ABS	Ocean	
	Barge Tankage	Washington, 248x56x17	31,110	31,110	50%	15,555	Moorage	Puget Sound	Per ABS	Ocean	
	Barge Tankage	Foss 252, 312x58x18	14,528	14,528	50%	7,264	Moorage	Puget Sound	Per ABS	Ocean	
D63056	Barge Tankage	Foss 248-P2	26,100	26,100	50%	13,050	Moorage	Puget Sound	Per ABS	Ocean	
D623438	Barge Tankage	Foss 185-P2, 185x50x12	11,900	11,900	50%	5,950	Moorage	Puget Sound	Per ABS	Ocean	
	Portable Tank	Baker 15 12hr response tanks	500	7,500	50%	3,750	Vendor	Seattle	Baker		1/28/2002
	Portable Tank	Baker, 6 12hr response tanks	155	776	50%	388	Vendor	Seattle	Baker		1/28/2002
	Portable Tank	Baker, 10 24hr response tanks	155	1,550	50%	775	Vendor	Seattle	Baker		1/28/2002
	Portable Tank	Baker, 40 24hr response tanks	500	20,000	50%	10,000	Vendor	Seattle	Baker		1/28/2002
9630	Steel Tank	Hoover Group Inc 350gal	8.3	8.3	50%	4	Yard	Seattle, E ST	Vendor		
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Warehouse	Seattle, Point Wells	Use/Quart	Ocean	
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Warehouse	Seattle, Point Wells	Use/Quart	Ocean	
9064	Portable Tank	LiquidTote, DOT approved	8.3	8.3	100%	8	Yard	Seattle, Pt Wells	Vendor	Ocean	
9065	Portable Tank	LiquidTote, DOT approved	8.3	8.3	100%	8	Yard	Seattle, Pt Wells	Vendor	Ocean	
	Bladder Tank	Collapsible Fabric Tank #6	238	238	100%	238	Spill Box	Seattle, Pt Wells	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank #5	238	238	100%	238	Spill Box	Seattle, Pt Wells	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank #3	238	238	100%	238	Spill Box	Seattle, Pt Wells	Use/Quart	Ocean	
	Bladder Tank	Collapsible Fabric Tank #1	238	238	100%	238	Spill Box	Seattle, Pt Wells	Use/Quart	Ocean	
9008	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Tacoma, FMC	Use/Quart	Ocean	1/10/1991
	Bladder Tank	Canflex/OLE-4	25	25	100%	25	Spill Box	Tacoma, FMC	Use/Quart	Ocean	

Total Derated BBL	119,128

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NRC Environmental Resources

Puget Sound COTP Zone

Decontamination and Salvage

ID#	Identification	Specification	Capacity/Speed	Storage	Home Base	Maintained	Date Acquired
7031	Blower	Copus, 150CFM	150CFM	Yard	Seattle, E.ST		6/1/1996
7052	Blower	Copus, 150CFM	150CFM	Yard	Seattle, E.ST		6/1/1996
7063	Blower	Copus, 150CFM	150CFM	Yard	Seattle, E.ST		6/1/1996
	Compressor	Emglo, gas		Wharehouse	Seattle, Pt Wells	Use/Quarterly	
7012	Compressor	180 CFM	180 CFM	Yard	Seattle, Pt Wells	Use/Quarterly	
7024	Compressor	Gard Denv,180 CFM	180 CFM	Yard	Seattle, Pt Wells	Use/Annual	
6291	Decon Pool	10'x30'			Seattle, Pt Wells	Use	11/1/1996
6292	Decon Pool	10'x30'			Seattle, Pt Wells	Use	11/1/1996
6395	Decon Pool	20' x 100'			Seattle, Pt Wells	Use	6/1/2000
	Generator	DAPC, 3000WT		Yard	Seattle, E.ST	Use/Quarterly	
7066	Generator	Yanmar, 7 KW	7 KW	Trailer #3154	Seattle, Pt Wells	Use/Annual	6/1/1996
	Generator	Yanmar 7.5KW, diesel	7.5KW	Truck #1088	Seattle, Pt Wells	Use/Quarterly	
	Generator	Honda		Yard	Spokane		
7097	Generator	Inger Rand 5000V		Spill Box	Seattle, P-90	Each Use	
7101	Generator	4000w	4KW	Spill Trailer #3140	Seattle, Pt Wells	Use/Quarterly	7/1/1998
3153	Portable Shower	Portable shower		Yard	Seattle, Pt Wells		1/28/2002
5162pp	Power Pack	Whitco, hydraulic		Tote, Tent, Yard	Seattle, Pt Wells		
	Pressure Washer	Generac, 3500psi, portable, gas	3500psi	Warehouse	Seattle, Pt Wells	Use/Quarterly	
5048	Pressure Washer	HydroTech, trailered, 3000psi	3,000psi	Yard	Seattle, E.ST	Each Use	7/1/1999
5026	Pressure Washer	Landa, hot, 4000 psi	4000psi	Yard	Seattle, Pt Wells	Use/Annual	12/1/1992
	Pressure Washer	M-ITM, electric 440V	3500psi	Warehouse	Seattle, Pt Wells	Use/Quarterly	
	Pressure Washer	Generac, 3500psi, portable, gas	3500psi	Warehouse	Seattle, Pt Wells	Use/Quarterly	
5015	Pressure Washer	Landa, hot, 3000 psi	3000psi	Yard	Seattle, E.ST	Use/Annual	7/1/1992
	Pump	Honda, 2"		Yard	Spokane		
	Pump, acid	Wilden		Yard	Spokane		
4078	Pump, air diaphram	Wilden 2", M-8	158gpm	Yard	Seattle, Pt Wells	Each Use	
	Pump, air diaphram	VersaMatic 1.5"		Shed	Seattle, E.ST	Use/Annual	
	Pump, air diaphram	2"		Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, air diaphram	Yanmar		Spill Box	Tacoma, FMC	Use/Annual	
4009	Pump, air diaphram	Wilden 3", M-15	240 gpm	Tent, Yard	Seattle, Pt Wells	Use/Annual	
4100	Pump, air diaphram	Wilden 3", M-15	240 gpm	Tent, Yard	Seattle, Pt Wells	Use/Annual	
4103	Pump, air diaphram	Wilden 3", M-15	240 gpm	Tent, Yard	Seattle, Pt Wells	Use/Annual	
	Pump, air diaphram	Wilden 2", M-8	158 gpm	Tent, Yard	Seattle, Pt Wells	Use/Annual	
	Pump, air diaphram	SandPiper 2"	158 gpm	Spill Box	Seattle, P-90	Use/Annual	
4110	Pump, centrifugal	Deutz/Blackmen,4",diesel	625 gpm	Container #3076	Seattle, Pt Wells	Use/Annual	6/1/1996
4109	Pump, centrifugal	Deutz/Blackmen,4",diesel	625 gpm	Container #3076	Seattle, Pt Wells	Use/Annual	6/1/1999
	Pump, chemical	Wilden, 2", M-8	158 gpm	Tent, Yard	Seattle, Pt Wells	Use/Annual	
	Pump, double- diaphrsm	CH&A		Tent, Yard	Seattle, Pt Wells	Use/Annual	
4047	Pump, impellor	Robin 1.5"		Yard	Seattle, E.ST	Use/Annual	
4140	Pump, peristalic	Yanmar 2"		Wood crate, Yard	Seattle, Pt Wells	Use/Annual	10/1/1999
4161	Pump, peristalic			Wood crate, Yard	Seattle, Pt Wells	Use/Annual	6/1/2000
	Pump, submersible	Jabsco, 3/4", 100V electric	23 gpm	Warehouse	Seattle	Each Use	
	Pump, submersible	Marco,4", h ydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, submersible	Marco, 4", hydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, submersible	Jabsco, 3/4", 110V electric	23 gpm	Warehouse	Seattle	Use/Annual	
	Pump, submersible	Marco, 4", hydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, submersible	Marco, 4", hydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, submersible	Marco, 4", hydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, submersible	Marco, 4", hydraulic	600 gpm	Warehouse	Seattle, Pt Wells	Use/Annual	
	Pump, trash	Multiquik, 2"		Warehouse	Seattle, Pt Wells	Each Use	
	Pump, trash	Yanmar, 4"		Container	Seattle, Pt Wells	Use/Annual	
	Pump, trash	Oberdorfer		Spill Box	Port Townsend	Use/Annual	
	Pump, trash	Yanmer, 2"	260gpm	Spill Box	Bellingham, pier	Use/Annual	
	Pump, trash			Truck #1083	Seattle, Pt Wells	Use/Annual	
	Pump, trash	Yanmar, 2", diesel	260gpm	Warehouse	Seattle, E.ST	Use/Annual	
4006	Pump, trash	Yanmar 2"	260gpm	Spill Box	Seattle, P-90	Use/Annual	
4116	Pump, trash	Yanmar, 2", diesel	260gpm	Warehouse	Seattle, Pt Wells	Use/Annual	6/1/1996
7053	Ventelation Fan			Warehouse	Seattle, Pt Wells		
7065	Ventelation Fan	Critical Systems		Warehouse	Seattle, Pt Wells		

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NRC Environmental Resources

Puget Sound COTP Zone

Transportation

SDS	Identification	Specification	Storage	Home Base	Maintained	Date Acquired
9088	ATV	Honda	Trailer #3190 Shoreline Clean-up	Seattle, Pt Wells	Quarterly	
9092	ATV	Honda TXR 300	Trailer #3152	Seattle, Pt Wells	Quarterly	
2002	Crane Truck, 10T	International, diesel w/10 Ton Crane	Vehicle	Seattle, Pt Wells	Quarterly	12/21/1995
	ER Van	IZUZU NPR HD	Yard	Seattle, Pt. Wells	Quarterly	1/1/2002
1140	ER Van	Isuzu	Yard	Seattle, PT Wells	Qyarterly	
9010	Forklift	Toyota, 6K- 10K	Yard	Seattle, Pt Wells		
1139	Isuzu Crew Cab ER Van	IZUZU NPR HD, #1139	Yard	Seattle, Pt Wells	Use/Quarterly	1/1/2002
2072	Roll- Off Truck	Peterbuilt 357 Rolloff Truck	Yard	Seattle, Pt Wells	Use/Quarterly	9/20/2000
2082	Tractor	Kenworth, 80,000G	Vehicle	Seattle, Pt Wells	Quarterly	
3152	Trailer, ATV	Big Tex, ATV Transport	Yard	Seattle, Pt Wells	Quarterly	6/1/2000
6397	Trailer, boat	EZ Loader		Puget Sound	Quarterly	
6396	Trailer, boat	EZ Loader	Yard	Seattle, Pt Wells	Quarterly	
6344	Trailer, boat	King	Yard	Seattle, Pt Wells	Quarterly	10/1/1998
6065	Trailer, boat	EZ Loader, holds Skimmer#1	Yard	Seattle, Pt Wells	Quarterly	
6067	Trailer, boat	EZ Loader, holds Skimmer#2	Yard	Seattle, Pt Wells	Quarterly	
3063	Trailer, boom	16' Equipment Trailer	Yard	Seattle, Pt Wells	Quarterly	
3165	Trailer, Office	Evergreen 8x24	Yard	Seattle, Pt Wells		
3190	Trailer, Shoreline Clean up	638 Great Dane	Yard	Seattle, Pt Wells	Quarterly	11/3/2001
3164	Trailer, Shoreline Clean-up	30ft trailer shoreline cleanup	Yard	Seattle, Pt Wells	Quarterly	6/1/2000
3140	Trailer, Spill Response	18' Pace Trailer	Yard	Seattle, Pt Wells	Quarterly	8/17/2000
3200	Trailer, Spill Response		Trailer	Aberdeen, Port	Quarterly	
3199	Trailer, Spill Response	20'	Fish Pens	Port Angeles	Quarterly	
3008	Trailer, Spill Response	Kentucky 1974	Trailer	Seattle, Pt.Wells	Quarterly	12/1/1992
3096	Trailer, Utility	12' Utility Trailer, 1-2 1	Yard	Seattle, Pt Wells	Quarterly	9/1/1996
3172	Trailer, Wildlife (excludes supplies)	Fruehauf Wildlife Trailer	Yard	Seattle, Pt Wells	Quarterly	
1049	Truck /Box Van,1T	Chevy, box,gas	Vehicle	Seattle, Pt Wells	Quarterly	12/1/1992
1046	Truck /Box Van,1T	Ford F350,UHF/VHF, gas	Vehicle	Seattle, E.ST	Quarterly	2/1/1991
1109	Truck 1- 3T	F450, crewcab, 4x4, flatbed	Vehicle	Seattle, Pt Wells	Quarterly	6/23/1999
1126	Truck 1-3T	F-450,crewcab, 4x4, flatbed	Vehicle	Spokane	Quarterly	5/26/2000
1112	Truck 1-3T	F450, crewcab, 4x2, flatbed	Vehicle	Seattle, Pt Wells	Quarterly	12/20/1999
1090	Truck 1T	Ford F-250, crewcab,	Yard	Seattle, Pt Wells	Quarterly	
1101	Truck 1T	Ford F-250, Super Duty 4x4 Supercab Pickup	Yard	Seattle, Pt Wells	Quarterly	
1089	Truck w/ box van	F-550 Box Van	Vehicle	Seattle, Pt Wells	Quarterly	10/7/1998
1098	Truck w/ box van	Nissan Truck Box Van	Yard	Seattle, Pt Wells	Quarterly	
1092	Truck,	Ford F250XL super duty	Vehicle	Seattle, Pt Wells	Quarterly	12/1/1998
1077	Truck, 1T	Ford F250,4gate	Vehicle	Seattle, Pt Wells	Quarterly	3/30/1998
1063	Truck, 1T	Ford F250	Vehicle	Spokane	Quarterly	10/1/1997
1107	Truck, 1T	Ford F250XL	Vehicle	Seattle, Pt Wells	Quarterly	11/1/1998
1096	Truck, 1T	Ford F250, 4x4	Vehicle	Seattle, Pt Wells	Quarterly	3/1/1998
1083	Truck, 1T	Ford F350, crewcab, 4x4	Vehicle	Seattle, Pt Wells	Quarterly	8/16/1998
1062	Truck, 1T	1997 Ford F250 Supercab Jake	Vehicle	Seattle, Pt Wells	Quarterly	10/1/1997
1043	Truck, 1T	Ford F350, crewcab, 4x4	Vehicle	Seattle, Pt Wells	Quarterly	
1007	Truck, 1T	Ford F350, crewcab	Vehicle	Seattle, Pt Wells	Quarterly	
1093	Truck, 1T	F-250	Vehicle	Seattle, Pt Wells	Quarterly	12/3/1998
1011	Truck, 3/4T	Ford F250,crewcab, gas	Vehicle	Seattle, Pt Wells	Quarterly	12/1/1992
1012	Truck, 3/4T	Ford F250,crewcab, gas	Vehicle	Seattle, Pt Wells	Quarterly	12/1/1992
1079	Truck,1T	Ford F350, crewcab, flatbed	Vehicle	Seattle, Pt Wells	Quarterly	4/14/1998
1045	Van,1T, rspns	Ford F350,VHF/UHF, gas	Vehicle	Seattle, Pt Wells	Quarterly	
1048	Van,1T, support	Chevy Astro, gas,VHF	Vehicle	Seattle, Pt Wells	Quarterly	9/1/1992

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NRC Environmental Resources

Puget Sound COTP Zone

Hazmat

ID#	Identification	Specification	Storage	Home Base	Maintained	Date Acquired
	Breathing Equipment	MSA, Hip Unit	Yard	Spokane		
	Breathing Equipment	MSA, Hip Unit	Yard	Spokane		
8075	Gas Meter	TMX 412 4 gas meter	Office	Seattle, Pt Wells	Use/Quarterly	1/1/1998
8088	Gas Meter	ATX 612 4 gas meter	Office	Seattle, Pt Wells	Use/Quarterly	
8074	Gas Meter	TMX 412 4gas meter	Office	Seattle, Pt Wells	Use/Quarterly	1/1/1998
8072	Gas Meter	TMX 412 4 gas meter	Office	Seattle, Pt Wells	Use/Quarterly	6/1/1998
4089	Hako Vac	Dualflex	Warehouse	Seattle, Pt Wells		12/1/1992
	Hako Vac	Dualflex	Warehouse	Seattle, Pt Wells		
4088	Hako Vac	Dualflex	Warehouse	Seattle, Pt Wells		12/1/1992
4159	HepVac	EuroClean	Warehouse	Seattle, Pt Wells		
4158	HepVac	EuroClean	Warehouse	Seattle, Pt Wells		
8051	Mercury Vapor Analyzer			Seattle, Pt Wells		10/1/1996
	MercVac	MilFisk	Warehouse	Seattle, Pt Wells		
7144	SCBA	Premaire		Seattle, Pt Wells	As Needed	1/1/2001
7145	SCBA	Premaire		Seattle, Pt Wells	As Needed	1/1/2001
7143	SCBA	Premaire		Seattle, Pt Wells	As Needed	1/1/2001
7116	SCBA	MSA	Truck #1089	Seattle, Pt Wells	As Needed	1/6/2000
7142	SCBA	Premaire		Seattle, Pt Wells	As Needed	1/1/2001
7115	SCBA	MSA	Truck #1089	Seattle, Pt Wells	As Needed	1/6/2000
7092	SCBA	MSA	Truck #1089	Seattle, Pt Wells	As Needed	
7091	SCBA	MSA	Truck #1089	Seattle, Pt Wells	As Needed	
8071	Soil sample Kit		Container, Yard	Seattle, Pt Wells		
8070	Soil sample Kit		Container, Yard	Seattle, Pt Wells		

Communication

ID#	Identification	Specification	Storage	Home Base	Maintained	Quantity
	Bank Charger	Vertex, contains 6 radios	Training Trailer	Seattle, Pt Wells	As Needed	1
	Bank Charger	Vertex, contains 6 radios	Training Trailer	Seattle, Pt Wells	As Needed	1
	Bank Charger	Vertex, contains 6 radios	Training Trailer	Seattle, Pt Wells	As Needed	1
	Field Computers		Office	Seattle, Pt Wells	Use/Quarterly	
	Radio, UHF Marine	Standard, 4 radios		Seattle, Pt Wells	As Needed	4
	Radio, VHF	Yeesu, 8 radios	Shoreline clean-up trailer #3154	Seattle, Pt Wells	As Needed	8
	Radio/Cellular Phones	Nextel, 50 radios	Office	Seattle, Pt Wells	As Needed	50

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TIDEWATER

Salvage and Marine Fire-Fighting

Tidewater Barge Lines (TIDEWATER) has contracted with Resolve Salvage and Fire (Americas), Inc. (RESOLVE) at 1510 SE 17th Street, Suite 400, Ft. Lauderdale, FL 33316 for emergency salvage, firefighting, lightering, and towing services. Their 24/7 contact information is: +1 (954) 764-8700, EMX@resolvemarine.com. Terms of the agreement are provided in the attached "OPA-90 Vessel Responses Plan Citation & Salvage and Marine Fire-Fighting Funding Agreement" (Funding Agreement) dated January 1, 2014. TIDEWATER evaluated the RESOLVE for adequacy per 33 CFR 155.4050 and RESOLVE's adequacy certification statements are maintained at TIDEWATER's office in Vancouver, Washington.

A Certificate of Coverage for Salvage, Firefighting and Emergency Lightering Services for applicable TIDEWATER vessels is attached to the Funding Agreement. A Vessel Pre-Fire Plan Receipt & Certification of Acceptability for applicable TIDEWATER vessels is also attached to the Funding Agreement per 33 CFR 155.4035(b)(2).

The information required by 33 CFR 155.4030(a) about RESOLVE's salvage and marine fire-fighting (SMFF) services have been submitted to, and approved by, the US Coast Guard (USCG). TIDEWATER's Vessel Response Plan (VRP) incorporates by reference the resources identified in RESOLVE's geographic-specific appendices listed as "Resolve Salvage and Fire (Americas), Inc. Revision 8.0 dated 26 Aug 2013," which is on file and accepted at HOMEPORT.USCG.mil.

RESOLVE is TIDEWATER's primary resource provider for each SMFF service listed in Table 155.4030(b) in the Captain of the Port (COTP) zone in which TIDEWATER vessels operate (Columbia River COTP zone). RESOLVE warrants that it is capable of providing the services in accordance with planned response timeframes. TIDEWATER is an additional resource provider for SMFF services.

RESOLVE has given TIDEWATER written consent to be listed in this VRP in the Funding Agreement dated January 1, 2014 per 33 CFR 155.4045(b).

Shipboard spill mitigation procedures for unmanned tank barges carrying oil as primary cargo and nontank vessels have been provided to RESOLVE (per 33 CFR 155.1040(c) and 5035(c)). An electronic copy of TIDEWATER's VRP, including shipboard spill mitigation procedures and shore-based response activities, has been provided to the USCG.

RESOLVE is integrated into TIDEWATER's response organizations as an integral part of the ICS (Incident Command System). TIDEWATER's response organizations are consistent with the requirements set forth in 33 CFR 155.1040(d), 33 CFR 155.5035(d) and with NIMS/ICS.

RESOLVE AND TIDEWATER will coordinate response activity through the Incident Command system (ICS). RESOLVE exercises regularly within the NIMS/ICS system and has excellent working relationships with TIDEWATER's named oil spill removal organizations (OSROs). This VRP is consistent with applicable Area Contingency Plans (ACPs) and the National Oil and Hazardous Substances Pollution Contingency Plan, per 33 CFR 155.1030(h) and 155.5030(f).

Company Response Equipment

Company response resources consist of equipment and boom staged at each Tidewater facility, Barrel-O-Boom, and spill kits carried aboard tugs and barges transporting petroleum products, and ten strategically located response trailers. As it is company owned, no other plan holders rely on this equipment.

Response Equipment Inspection and Maintenance

Equipment shall be maintained according to manufacturer specifications. Maintenance and inspection records shall be maintained on file for at least five years and made available upon request to the Washington State Department of Ecology.

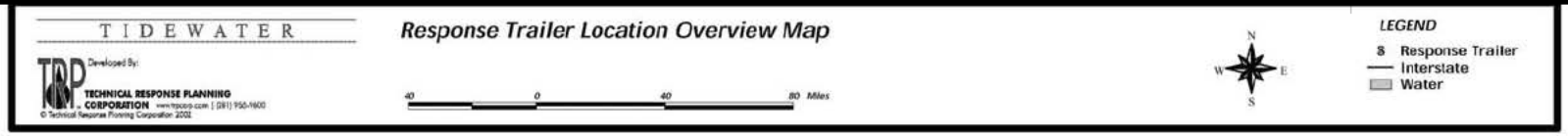
TIDEWATER TUGBOAT ONBOARD EQUIPMENT INVENTORY

EQUIPMENT NAME	QUANTITY	MAKE	AGE	MODEL NAME	MAINT. SCHED.	DESIGN LIMIT REMARKS
Barrel-O-Boom Kits (21)						
Boom	150 Feet	Kepner	1990	BOB 150	Quarterly	8" x 12" x 150' Sea Curtain
Tow bridle	1	Kepner	1990	Kepner	Quarterly	3,000 lb. Capacity
Poly handline	2	Kepner	1990	Kepner	Quarterly	75' lines
Spill Kits (50)						
55 gallon open top drums	2	Meyers	1991	17H-D.O.T.	Quarterly	Open Top
Sorbent pads	(1 bale) 100 pads	3M	1992	T-156	Quarterly	3/8" x 17" x 19"
Sorbent sweeps	1	3M	1992	T-126	Quarterly	3/8" x 19" x 100'
Handlines	2	Unknown	1992	Unknown	Quarterly	Polypropylene
Plastic bags	3	Poly Bag	1992	BEI	Quarterly	6 mil x 55 gal

TIDEWATER TUGBOAT ONBOARD EQUIPMENT INVENTORY, CONT'D

SPILL KIT AND BARREL-O-BOOM LOCATIONS			
VESSEL NAME	**SPILL KITS**	**BARREL-O-BOOM**	**DATE INSTALLED**
BETTY LOU	1	2	9/30/94
CAPTAIN BOB	1	1	9/30/94
CHALLENGER	1	1	9/30/94
CLARKSTON	1	1	7/01/08
THE CHIEF	1	2	11/15/96
DEFIANCE	1	1	9/30/94
HURRICANE	1	1	11/15/96
INVADER	1	1	9/30/94
LEGEND	1	2	9/30/94
LIBERTY	2	1	7/11/98
MAVERICK	1	2	9/30/94
MARY GAIL	1	1	9/30/94
OUTLAW	1	1	9/30/94
REBEL	1	2	9/30/94
SUNDIAL	1	1	9/30/94
TIDEWATER	1	2	9/30/94
BARGE 1	1	0	9/30/94
BARGE 2	1	0	9/30/94
BARGE 4	1	0	9/30/94
BARGE 7	1	0	9/30/94
BARGE NEW ENDEAVOR	1	1	8/2007
BARGE NEW DAWN	1	1	8/2006
BARGE NEW FRONTIER	1	1	9/2008
BARGE NEW VISION	1	1	9/2007
BARGE GLENN	1	0	9/30/94
BARGE EXPLORER	1	0	8/15/95
BARGE PIONEER	1	0	9/1994
BARGE PROSPECTOR	1	0	3/12/96
BARGE TRI-CITIES VOYAGER	1	0	5/09/97

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


TIDEWATER
Developed By:
TECHNICAL RESPONSE PLANNING CORPORATION
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Response Trailer Location Overview Map
40 0 40 80 Miles
N
W
E
S
LEGEND
Response Trailer
Interstate
Water

LOCATION CONTACT PHONE NUMBER
Tidewater Industrial Center
6305 NW Old Lower River Road
Vancouver, WA
(2 trailers)
Gary Stonewall (503) 341-3367

Tidewater Terminal Company
535 Port Avenue
Umatilla, OR
Mark Davis (509) 396-1179
Ron McClary
(509) 727-1144

Tidewater Terminal Company
Tank Farm Road
Pasco, WA Mark Davis (509) 396-1179
Ron McClary
(509) 727-1144

Tidewater Terminal Company
Port of Wilma Road
Clarkston, WA
Mark Davis (509) 396-1179
Ron McClary
(509) 727-1144

Shaver Yard
309 East “A” Street
Rainier, OR
Shaver Dispatch (503) 228-8847

Sundial
5605 NE Sundial
Troutdale, OR
Gary Stonewall (503) 341-3367

Port of Hood River
Marina Park
Hood River, OR
Dave Harlan or
Joe Pounder
Port Office
(541) 386-3200
(b) (6) (Cell)
(541) 386-1645

Tidewater Terminal Co. Container Yard
70 Marine Drive
Boardman, OR
Roy Drago, Jr. (541) 481-3625

Little Goose Dam Scott Ross (509) 399-2233

*, Tosoro Northwest Terminal
2900 Sacajawea Park Road

Pasco, WA 99301
Will Richard (509) 543-6101
**Response trailer and equipment is not company owned. This trailer and equipment is available through a mutual agreement with Northwest Terminal to respond to spills at Tidewater's Snake River Terminal.*

TIDEWATER RESPONSE TRAILERS - EQUIPMENT TRAILERS

EQUIPMENT NAME	QUANTITY	MAKE	AGE	MODEL NAME	INSPECTION SCHEDULE	DESIGN LIMIT REMARKS
Oil containment boom 8"x12"	600'	Aftech	1991	BHD81207RF (PUR)	Quarterly	Harbor – 2" chop
Boom tow bridles w/ tow lines	2	Aftech	1991	M-812	Quarterly	M-812 boom
Anchor buoy system	4	Aftech	1991	M-25	Quarterly	25 lb. w/ mud flukes
Boom lights	8	Aftech	1991	Scott	Quarterly	360° Amber – 2 miles
Sorbent sweeps – bales	4	3M	1991	T-126	Quarterly	19"x100'x3/8"
Sorbent pads – bales	4	3M	1991	T-156	Quarterly	18"x18"x3/8"; 100/bale
Boom cleaner	1	Aftech	1991	P-5	Quarterly	20:1 Concentrate
2" oil skimmer	1	Skim Pak	1991	M-4200	Quarterly and after use	4200 gph / 70 gpm
2" diesel trash pump w/ QC	1	Yanmar	1991	255	Biannually	20-185 gpm
2" PVC suction hose	4	Pacific Echo	1991	S-115-01	Quarterly	2"x20' lt.wt. w/ QC
2" dischrg hose-oil svc (Black)	2	Titan	1991	MC-2000	Quarterly	2"X50' lay flat w/ QC
2" dischrg hose-fire svc (Red)	1	Sunflow	1991	SF-50R	Quarterly	2"X50' lay flat w/ QC
QC to NPT male adapter	2	PT Coupling	1991	2DX1.5	Quarterly	2" to 1 ½"
Adapter 2" M QC	1	Dickson	1992		Quarterly	2" male to male
Adapter 2" F QC	1	Dickson	1992		Quarterly	2" female to female
2" poly ball valve, FNPT	2	Dickson	1992		Quarterly	
Combo fire nozzle	1	UFS	1991	1575	Quarterly	1 ½" nylon
Sorbent pad wringer	1	Aftech	1991	76-3	Quarterly	Wrings sorbent pads
55-gal. open-top drums	4	DOT	1991	17-H	Quarterly	Disposal drums
Disposable bags – box	1	Mohawk	1991	3717	Quarterly	6 mil plastic, 50/box
Port-a-tank	1	SEI Ind.	1991	SEI-1200	Quarterly	1200 gal. capacity
15' aluminum boat	1	Custom	1991	TES Boom Boat	Biannually	W/30 HP Yamaha OB
Chemical fire extinguisher	1	ABC	1991	TPG-10G	Annual	10 lb.
5/8" hand line; anchor line	200'	TES	1991	TES	Quarterly and after use	

EQUIPMENT NAME	QUANTITY	MAKE	AGE	MODEL NAME	INSPECTION SCHEDULE	DESIGN LIMIT REMARKS
Metal fence stakes	3	Various	1991	Various	Quarterly and after use	
10' aluminum pike pole	1	Various	1991	Various	Quarterly and after use	
Square & round point shovels	2	Various	1991	Various	Quarterly and after use	
Screened pitchfork	1	Various	1991	Various	Quarterly and after use	
Rake	1	Various	1991	Various	Quarterly and after use	
Personal Protective Gear:						
Eye protectors – prs.	8	Various	1991	Various	Quarterly and after use	
Hard hats	4	Various	1991	Various	Quarterly and after use	
Raingear – sets	20	Various	1991	Various	Quarterly and after use	
PVC overboots – prs.	20	Various	1991	Various	Quarterly and after use	
PVC work gloves – prs.	20	Various	1991	Various	Quarterly and after use	
Cotton inner liner gloves – prs.	20	Various	1991	Various	Quarterly and after use	
First aid kit	1	Various	1991	Various	Quarterly and after use	
Work vests (life vests – USCG)	4	Various	1991	Various	Quarterly	USCG-approved
Flashlights	2	Various	1991	Various	Quarterly	Explosion-proof
Flashlight batteries	EXTRAS	GE			Quarterly	
Spare bulbs – case	1	Various	1991	Various	Quarterly	
6-volt lanterns	2	Various	1991	Various	Quarterly	
6-volt spare batteries/bulbs	2	Various	1991	Various	Quarterly	
Hydraulic jack	1	Various	2002	Various	Quarterly	
Star lug wrench	1	Various	2002	Various	Quarterly	

TIDEWATER RESPONSE TRAILERS – EQUIPMENT TRAILERS, CONTINUED

*Tesoro Northwest Terminal Response Trailer - Equipment List				
Manufacturer	**TYPE**	**Name Plate**	**Recovery Rate**	**Derated Capacity**
Oily Recovery Equipment				
Vac-U-Max	Vac-U-Max	55-26 (Rated for use in extreme weather)	66 GPM	13 GPM
Skim Pac		4200	66 GPM	13 GPM
Homelite	2" Diaphragm Pump	111DP2-1 (Rated for use in extreme weather)	200 GPM	40 GPM
Centrifugal Systems	Belt Skimmer	14-6	15 GPM	3 GPM
Boom Equipment				
Manufacturer	**TYPE**	**Dimensions (L X W)**	**Current Rating**	**Suited for Extreme Weather**
Kepner	Curtain	100' by 10"	4 Knots	Yes
3M#270	Sorbent	6 – 10' x 5""	4 Knots	Yes
Manufacturer	**Type**	**Name Plate**	**Rating or Design Capacity**	**Suited for Extreme Weather**
Miscellaneous Emergency Response Equipment				
Sears	12' Boat	425#		Yes
Denyo Co. Ltd.	Gas Generator	Multiquip 3200R	3200 Watt 120/240 Volt	Yes
Sorbent	Pads	Type 151 3 Bales		

**Response trailer and equipment is not company owned. This trailer and equipment is available through a mutual agreement with Northwest Terminal to respond to spills at Tidewater's Snake River Terminal.*

TIDEWATER CONTAINMENT BOOM

LOCATION		AVAILABILITY/ STATUS	MAKE/ MODEL	HEIGHT/ SIZE	QUANTITY	OPERATING ENVIRONMENT			END CONNECTORS	NOTES
REGION	CITY/ BARGE					RIVER/ CANAL	INLAND WATERS	OPEN WATERS		
LCR	Rainier, OR	Available	Aftech	8" x 12"	600'	X			Kepner	
LCR	Portland/ Vancouver	Available	Aftech	8" x 12"	2,800'	X			Kepner	
LCR	Portland/ Vancouver	Available	Aftech	10" x 16"	1,400'	X			Kepner	
LMCR	Hood River, OR	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Boardman, OR	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Umatilla, OR	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Umatilla, OR	Available	Cont. Sys.	8" x 12"	1,200'	X				
MCR	Pasco, WA	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Pasco, WA	Available	Cont. Sys.	8" x 12"	1,200'	X				
MCR	Little Goose Dam	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Clarkston, WA	Available	Aftech	8" x 12"	600'	X			Kepner	
MCR	Clarkston, WA	Available	Cont. Sys.	8" x 12"	1,200'	X				
ALL	Various	Available	Kepner	8" x 12"	3,150'	X			Kepner	Expandable bocm staged on various tugs and barges
LCR, MCR, LSR	*Pioneer*	Available	Kepner	8" x 12"	1,200'	X			Kepner	
LCR, MCR, LSR	*The Explorer*	Available	Kepner	8" x 12"	1,200'	X			Kepner	
LCR, MCR, LSR	*Prospector*	Available	Kepner	8" x 12"	1,200'	X			Kepner	
LCR, MCR, LSR	*Tri-Cities Voyager*	Available	Kepner	8" x 12"	1,200'	X			Kepner	

TIDEWATER RECOVERY EQUIPMENT

LOCATION		AVAILABILITY/ STATUS	MAKE/ MODEL	SKIMMER TYPE	QTY	NAME PLATE CAPACITY (GPM)	EFFICIENCY RATE	BBLS PER DAY DERATED	SHALLOW/OPEN WATER CAPABLE	NOTES
REGION	CITY/ BARGE									
MCR	Wilma, WA	Available	Multiquip – Diesel	3" Trash pump	1	285	20%	1,955	Shallow/Open	
MCR	Wilma, WA	Available	Multiquip – Gas	3" Trash pump	1	285	20%	1,955	Shallow/Open	
MCR	Wilma, WA	Available	Teel – Gas	2" Centrifugal pump	1	195	20%	1,337	Shallow/Open	
MCR	Pasco, WA	Available	Sandpiper – Air	2" Diaphragm pump	4	120 ea.	20%	823 ea.	Shallow/Open	
MCR	Pasco, WA	Available	Homelite – Gas	3" Diaphragm pump	1	70	20%	480	Shallow/Open	
MCR	Pasco, WA	Available	Homelite – Gas	3" Trash pump	6	285 ea.	20%	1,955 ea.	Shallow/Open	
MCR	Pasco, WA	Available	Homelite – Gas	2" Trash pump	1	185	20%	1,269	Shallow/Open	
MCR	Pasco, WA	Available	Gorm Rupp – Electric	2" Centrifugal pump	1	195	20%	1,337	Shallow/Open	Explosion-proof
MCR	Pasco, WA	Available	Gorm Rupp – Electric	3" Centrifugal pump	2	285 ea.	20%	1,955 ea.	Shallow/Open	Explosion-proof
MCR	Pasco, WA	Available	Gorm Rupp – Gas	3" Centrifugal pump	1	285	20%	1,955	Shallow/Open	
MCR	Pasco, WA	Available	Jabsco – Electric	1 ¼" Centrifugal pump	1	100	20%	686	Shallow/Open	Explosion-proof
MCR	Umatilla, OR	Available	Homelite – Gas	3" Trash pump	1	285	20%	1,955	Shallow/Open	
MCR	Umatilla, OR	Available	Sandpiper	2" Diaphragm pump	1	120	20%	823	Shallow/Open	
LCR	PDX/Vanc.	Available	Sandpiper	2" Diaphragm pump	3	120 ea.	20%	823 ea.	Shallow/Open	
LCR	PDX/Vanc.	Available	Homelite – Gas	3" Trash pump	3	285 ea.	20%	1,955 ea.	Shallow/Open	
LCR	PDX/Vanc.	Available	Homelite – Gas	3" Diaphragm pump	1	85	20%	583	Shallow/Open	
LCR	PDX/Vanc.	Available	Vac-U-Max	2" Vacuum pump	1	50	20%	343	Shallow/Open	
LCR	PDX/Vanc.	Available	Wilden – Air	3" Diaphragm pump	1	85	20%	583	Shallow/Open	
LCR	PDX/Vanc.	Available	Lamor Minimax 12 Skimmer	Brush disk skimmer/	1	52.8	20%	362	Shallow/Open	
LCR	PDX/Vanc.	Available	Lamor Power Pack - Gas	Hydraulic power w/ suction pump	1	67	20	459	Shallow/Open	
LCR	Rainier, WA	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
LCR	PDX/Vanc.	Available	Douglas/2" Skim Pak	Weir skimmer	2	70 ea.	20%	480	Shallow/Open	
LCR	Troutdale	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480 ea.	Shallow/Open	
LMCR	Hood River	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	

LOCATION		AVAILABILITY/ STATUS	MAKE/ MODEL	SKIMMER TYPE	QTY	NAME PLATE CAPACITY (GPM)	EFFICIENCY RATE	BBLS PER DAY DERATED	SHALLOW/OPEN WATER CAPABLE	NOTES
REGION	CITY/ BARGE									
MCR	Boardman	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
MCR	Umatilla, OR	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
MCR	Pasco, WA	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
MCR	Little Goose	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
MCR	Clarkston, WA	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
LCR	PDX/Vanc.	Available	Douglas/3" Skim Pak	Weir skimmer	1	300	20%	2059	Shallow/Open	
MCR	Pasco, WA	Available	Douglas/3" Skim Pak	Weir skimmer	1	300	20%	2059	Shallow/Open	
LCR	PDX/Vanc.	Available	1976 Great Dane	40' mobile Command Center	1					
LCR	PDX/Vanc.	Available	1979 Fruehauf	40' supply trailer	1					
LCR, MCR, LSR	*Pioneer*	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
LCR, MCR, LSR	*The Explorer*	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
LCR, MCR, LSR	*Prospector*	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	
LCR, MCR, LSR	*Tri-Cities Voyager*	Available	Douglas/2" Skim Pak	Weir skimmer	1	70	20%	480	Shallow/Open	

LOCATION		AVAILABILITY/ STATUS	FIXED OR MOBILE	QUANTITY	TYPE BARGE, TANK, DRUM, TRUCK, ETC.	SHALLOW/OPEN WATER CAPABLE	STORAGE CAPACITY	NOTES
REGION	CITY							
LCR	Rainier, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
LCR	Portland/Vancouver	Available	Mobile	3	Port-a-tank	Beach	1,200 gallons each	1991 SEI
LMCR	Hood River, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
MCR	Boardman, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
MCR	Pasco, WA	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
MCR	Little Goose Dam	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
MCR	Umatilla, OR	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
MCR	Wilma, WA	Available	Mobile	1	Port-a-tank	Beach	1,200 gallons	1991 SEI
LCR	Portland/Vancouver	Available	Mobile	2	Pillow Tank	Beach	3,000 gallons each	SEI
LCR	Portland/Vancouver	Available	Mobile	1	Barge #4	Shallow/Open	544,236 gallons	Grade D
MCR	Pasco, WA	Available	Mobile	1	Barge #1	Shallow/Open	1,053,486 gallons	Grade D
LCR	Wauna	Available	Mobile	1	Barge #2	Shallow/Open	1,054,494 gallons	Grade A
LSR	Wilma, WA	Available	Mobile	1	Barge #7	Shallow/Open	620,000 gallons	Grade A
ALL	Various	Available	Mobile	15	TBL barges	Shallow/Open	1,404,466 (avg) gallons each	Various grades

TIDEWATER RESPONSE VESSELS

LOCATION		AVAILABILITY/ STATUS	TYPE OIL RECOVERY, RESPONSE, SUPPORT, ETC.	VESSEL LENGTH	SHALLOW/OPEN WATER CAPABLE	NOTES
REGION	CITY/ BARGE					
LCR	Rainier, WA	Available	Skiff	15'	Shallow	
LCR	Portland/Vancouver	Available	Skiff	15'	Shallow	Quantity 2
LCR	Troutdale, OR	Available	Skiff	15'	Shallow	
LMCR	Hood River	Available	Skiff	15'	Shallow	
MCR	Boardman, OR	Available	Skiff	15'	Shallow	
MCR	Umatilla, OR	Available	Skiff	15'	Shallow	
MCR	Umatilla, OR	Available	Skiff	14'	Shallow	
MCR	Pasco, WA	Available	Skiff	15'	Shallow	
MCR	Pasco, WA	Available	Skiff	14'	Shallow	
MCR	Little Goose Dam	Available	Skiff	15'	Shallow	
MCR	Wilma, WA	Available	Skiff	15'	Shallow	
MCR	Wilma, WA	Available	Skiff	14'	Shallow	
LCR	Portland/Vancouver	Available	Skiff	12'	Shallow	
LCR	Portland/Vancouver	Available	Response	28'	Shallow	
MCR	Pasco, WA	Available	Response	28'	Shallow	
ALL	Various	Available	Support	Various	Shallow/Open	Tugs, quantity 15
LCR, MCR, LSR	*Pioneer*	Available	Skiff	15'	Shallow	
LCR, MCR, LSR	*The Explorer*	Available	Skiff	15'	Shallow	
LCR, MCR, LSR	*Prospector*	Available	Skiff	15'	Shallow	
LCR, MCR, LSR	*Tri-Cities Voyager*	Available	Skiff	15'	Shallow	

TIDEWATER

November 12, 2004

Tracy Long
Chevron Pipe Line Company
2811 Hayes Road
Houston, TX 77082
(281) 596-2502

Subject: Tidewater Letter of Intent

Dear Tracy:

This letter represents Tidewater Barge Lines' commitment (Letter of Intent) to respond with manpower and equipment in the event Chevron Pipeline Company (CPL) activates our services to respond to a spill or release in or around Chevron Pipe Line's Pasco Terminal.

To protect the people and environment in the State of Washington, Tidewater Barge Lines and Chevron Pipeline Company have entered into a legal contract for Tidewater Barge Lines to provide emergency response support with qualified manpower and equipment to Chevron Pipeline Company, in the event of a release in or around Chevron Pipe Line's Pasco facility. Tidewater is a Primary Response Contractor for the Chevron Pipe Line Pasco Facility and all waters that could be impacted during a release (onshore and offshore).

Sincerely,

Dennis W. McVicker
Vice President

Tidewater Barge Lines
P.O. Box 1210
6305 NW Old Lower River Road
Vancouver, WA. 98660
E-mail: dennis@tidewater.com
Office Number 360-693-1491
24 hour Emergency Number: 503-289-4274

ChevronTexaco

Blanket Service Agreement

Plant/ BSA No./ Date/ Tracking No.
99015446 10/23/2003 DELI

VN:50019214
TIDEWATER BARGE LINES
PO BOX 1210
VANCOUVER WA 98666-1210
UNITED STATES
Phone 360-693-1491
Fax 1-360-694-8981

Purch Grp/Contact person/Telephone no.
PSU/CPL Proc Supl Mgmt/281-596-3517

Terms of Delivery: POB PER WORK AUTHORIZATION
Terms of Payment: Within 30 days Due net
Standard text
SHIP TO: As Instructed

This BLANKET SERVICE AGREEMENT Number 99015446 (.Agreement.) is entered into by and between Chevron Pipe Line Company, a Delaware corporation, and Texaco Pipelines LLC, a Delaware limited liability company, both with an address at 2811 Hayes Road, Houston, Texas 77082 (hereinafter collectively referred to as COMPANY) and Tidewater Barge (hereinafter CONTRACTOR) with an address at 6305 N.W. Old Lower River, Vancouver, WA 98666. Whenever in the Agreement it is said that COMPANY may exercise any right, it is understood and agreed that COMPANY may itself exercise any such right as may any Affiliate as defined in the attached Exhibit A3 Terms and Conditions for General Services.

WHEREAS, COMPANY desires from time to time to retain CONTRACTOR to perform Emergency Response services as COMPANY may request; and

WHEREAS, CONTRACTOR desires to perform such services for COMPANY as and when requested by COMPANY,

NOW THEREFORE, in consideration of the foregoing premises, and the mutual covenants and agreements set forth herein, the parties hereto agree to the attached Exhibit A3 Terms and Conditions for General Services and all other attachments and exhibits listed below, all of which shall form the Agreement between the Parties and all of which are incorporated herein for all purposes.

CONTRACTOR'S FEDERAL TAX ID: 93-0278300

Blanket Service Agreement

Plant/ BSA No./ Date/ Tracking No.
99015446 10/23/2003 DELI

If you are in agreement with the above changes, please sign below and return this to: Chevron Pipe Line Company, P. O. Box 4879, Houston, TX 77210-4879 within ten (10) days of your date of receipt to my attention.

If you have any questions please contact me at 281/596-3515 or email at deli@chevrontexaco.com.

Regards

Doug Elich, Jr.

Item	Material	Description	Size	Qty	Unit	Price	Net value
00001		Emergency Response		1.000	Each		
The item covers the following services:							
10		Unplanned Services		0	LO		
Total net price (w/o tax unless otherwise stated herein) USD							0.00

Blanket Service Agreement

Plant/ BSA No./ Date/ Tracking No.
99015446 10/23/2003 DELI

Attachments
Exhibit A3 Terms and Conditions for General Services
Tidewater "Emergency Response Rate Schedule" for
November 2002 through november 2003 5/25/04
Job Site Safety & Environmental Protection for Contractors (CPL-648)
Contractor Safety and Environmental Requirements (CPL-649)
ChevronTexaco Minimum Record-Keeping Requirements (CPL-671)
Drug, Alcohol, and Search Policy (CPL-673)
Certificate of Insurance (GO-279-12)
Contractor Waiver and Release of Lien
Subcontractor Waiver of Labor and/or Material Lien
California Proposition 65 Warning - Hazardous Substances Contractor Warning
HES Procedures General Safe Practices (Procedure Number: HES 102)

Signature _____ Date 5-25-04

Accepted By: Signature _____ Date 5-26-04

TIDEWATER

Emergency Response Rate Schedule

through June 30, 2011

Response Vessels		
28' Boat w/180hp motor	$114.79 hr	
12'-15' boat w/7 to 30 hp motor	$31.88 hr	
Containment Equipment		
10"x16" Contractor Boom	$2.87 ft/day	
8"x 12" Contractor Boom	$1.85 ft/day	
8"x 12" Expandable Boom	$2.23 ft/day	
Standby Booming (not deployed)	$0.32 ft/day	
Anchor System	$19.13 day	
Boom Lights	$12.75 day	
Sorbent Pd(1bale -100pds) 3/8"x17"x 19"	$51.02 bale	
Sorbent Sweeps(3/8"x19"x100')	$76.52 bale	
Support Vessels		
Flat Deck Barges (dependent on size) from:	$289.86 day	
to:	$2,318.91 day	
Tugs (dependent on hp) from:	$260.88 hr	
to: (plus fuel per Tidewater's Rate Schedule No. 6-E)	$980.00 hr	
Crane Barge (Mr. T) w/out operator	$223.19 hr	
Tankage		
Single Hull Tank Barge(5000 bbl)	$1,159.45 day	
Single Hull Tank Barge(5,000 to 10,000 bbl)	$1,739.18 day	
Single Hull Tank Barge (10,000 to 30,000 bbl)	$2,318.91 day	
Double Hull Tank Barge (24,000 bbls)	$12,780.00 day	
Double Hull Tank Barge (over 30,000 bbl)	$22,365.00 day	
Port-A-Tank (1,200 gallon)	$127.54 day	
Pillow Tank (3000 gallon)	$318.85 day	
Recovery Equipment		
3" Skim Pack w/Power Pack	$114.79 day	
2" Skim Pack w/Power Pack	$95.65 day	
Sorbent Wringer	$6.38 day	
Transfer Equipment		
3" Diesel Trash Pump	$89.28 day	
2" Diesel Trash Pump	$76.52 day	
Diesel Diaphragm Pump	$70.15 day	
2" Air Pump	$63.77 day	
3" Hose 20' Section PVC	$15.30 day	
2" Hose 20' Section PVC	$12.75 day	
2" Discharge Hose Layflat 50'	$16.58 day	
1 1/2" Combo Pressure Nozzle	$3.83 day	
Vehicles		
40' Command Trailer	$382.62 day	
40' Supply Trailer	$127.54 day	+consumables
Pickup	$108.41 day	+fuel
Oil Spill Response Trailer	$172.18 day	+consumables
Communications Equipment		
VHF/UHF Radios	$19.13 day	
Miscellaneous Equipment		
5 KW Diesel Generator	$57.39 day	

Portable Lights		$35.71 day
Consumables and Supplies		
	Eye Protectors	Cost + 15%
	Disposable Raingear	
	Gloves	
	Inner Gloves	
	Plugs,Wedges, Shingles	
	Cleaner	
	Ploy Line	
	Fencing	
	Fencing Stakes	
	Boots	
	Fire Extinguisher Refills	
	Plastic Sheeting	
	Drums	
	Drum Liners	
	Plastic Bags	
	First Aid Supplies	
Labor		
Straight Time		
	Administrative Coordinator	$100.00 hr
	Tank Barge Operator	$75.36 hr
	Site Foreman	$75.36 hr
	Spill Technician	$54.86 hr
	Equipment Operator	$75.36 hr
Overtime		
	Administrative Coordinator	$100.00 hr
	Tank Barge Operator	$101.00 hr
	Site Foreman	$101.00 hr
	Spill Technician	$68.61 hr
	Equipment Operator	$101.00 hr

Notes

1. Hourly rates charged in half-hour increments
2. Daily rates charged for any portion of a 24-hour calender day.
3. Straight time is 0800-1700 (1 hour lunch) Monday-Friday or the first 8 hours of a shift dependent upon the applicable labor agreement.
4. Overtime 1700-0800 Monday-Friday; All day Saturday And Sunday or any time over 8 hours on a shift, dependent upon the applicable labor agreement.
5. Travel from employee's home port, to the site will be charged at the hourly rate above plus the standard IRS mileage rate.
6. On-site food, lodging, transportation, and incidentals will be charged as extra plus administrative charge of 15%.
7. Minimum call out is 8 hours per shift.
8. Adminstrative Coordinators will be billed for time spent on task.

CARSON OIL
Telephone: 503-224-8500, Fax: 503-222-0186

Memorandum of Agreement

To Whom It May Concern:
This Memorandum of Agreement is between the following parties;

Carson Oil Company
3123 NW 35th
Portland, OR 97210

And

Tidewater Barge Lines
6305 NW Old Lower River Road
Vancouver, WA 98660
Telephone: 360-693-1491 FAX: 360-694-8981

CARSON OIL delivers oil in bulk by tank truck to *TIDEWATER BARGE LINES* at *6305 NW OLD LOWER RIVER ROAD, VANCOUVER, WA 98660.*

In order to comply with Washington State Department of Ecology (Ecology) regulations, *CARSON OIL* must provide certain oil spill response labor and equipment resources for use in case of an oil spill during an oil transfer between the parties.

TIDEWATER BARGE LINES has oil spill response labor and equipment resources available at *6305 NW OLD LOWER RIVER ROAD, VANCOUVER, WA* that will be used in case of an oil spill.

During an oil transfer between the parties, *TIDEWATER BARGE LINES* hereby agrees to have available on-site and to be able to deploy the following response equipment in case of an oil spill:

1) At least two 55-gallon drums or other containers suitable for holding recovered oil and oil water.
2) At least two each of non sparking hand scoops, shovels and buckets.
3) Enough sorbent materials and storage capacity for a two barrel/84 gallon oil spill.
4) At least 500 feet of oil boom to be completely deployed (for containment, protection, or recovery) within one hour after an oil spill is detected.
5) At least an additional 500 feet of oil boom on-scene and available for containment, protection or recovery) within two-hours after an oil spill.

TIDEWATER BARGE LINES agrees to maintain the response equipment in good condition according to the manufactures instructions, ready for deployment and to have adequate labor trained and ready to deploy the response equipment in case of an oil spill.

In addition, *TIDEWATER BARGE LINES* hereby agrees to demonstrate the ability to deploy the response equipment in drill exercises in which *CARSON OIL* will be invited at least once per year. The drill exercises may be announced in advanced at a mutually convenient time between parties or may be unannounced as required by state (Ecology) or federal government representatives. The date time attendance and outcome of each drill exercise will be properly documented in accordance with *CARSON OIL* (Mobile) Facility Response Plan.

For: *(Facility Name)*

T. Clay Lumsden Sr. Compliance Manager
Title/Name
Date: 8/31/07

For: *TIDEWATER BARGE LINES*

J. R. [illegible] Environmental Compliance Manager
Title/Name:
Date: 8/31/07

Albina Fuel Co.
(360)816-8016
(888)308-5581
Fax: (360)816-8569

Memorandum of Agreement

To Whom It May Concern:
This Memorandum of Agreement is between the following parties:

Albina Fuel Co.
801 Main Street
Vancouver, WA 98660

And

Tidewater Barge Lines
6305 NW Old Lower River Road
Vancouver, WA 98660
(360)693-1491/Fax:

Albina Fuel Co. delivers oil in bulk by tank truck to *Tidewater Barge Lines* at 6305 NW Lower River Road, Vancouver, WA 98660.

In order to comply with Washington State Department of Ecology (Ecology) regulations, *Tidewater Barge Lines* must provide certain oil spill response labor and equipment resources for use in case of an oil spill during an oil transfer between the parties.

Tidewater Barge Lines has oil spill response labor and equipment resources available at 6305 NW Lower River Road, Vancouver, WA, 98660 that will be used in case of an oil spill:

1) At least two 55 gallon drums or other containers suitable for holding recovered oil and oil water.
2) At least two each of non sparking hand scoops, shovels and buckets.
3) Enough sorbent materials and storage capacity for a two barrel/84 gallon oil spill.
4) At least 500 feet of oil boom to be completely deployed (for containment, protection, or recovery) within one hour after an oil spill is detected.
5) At least an additional 500 feet of oil boom on-scene and available for containment, protection or recovery) within two-hours after an oil spill.

5) At least an additional 500 feet of oil boom on-scene and available for containment, protection or recovery) within two-hours after an oil spill.

Tidewater Barge Lines agrees to maintain the response equipment in good condition according to the manufactures instructions, ready for deployment and to have adequate labor trained and ready to deploy the response equipment in case of an oil spill.

In addition *Tidewater Barge Lines* hereby agrees to demonstrate the ability to deploy the response equipment in drill exercises in which Albina Fuel Co. will be invited at least once per year. The drill exercises may be announced in advanced at a mutually convenient time between parties or may be unannounced as required by state (Ecology) or federal government representatives. The date time attendance and outcome of each drill exercise will be properly documented in accordance with Albina Fuel Co. (Mobile) Facility Response Plan.

For: *Albina Fuel Co.*

Operations Mgr. / Bob Olson
Title/Name
Date: 11-19-07

For: *Tidewater Barge Lines*

Environmental Compliance Mgr.
Title/Name
Date: 11-26-07

Chevron

Global Gas

April 08, 2008

Mr. Pat Jensen
General Manager
Tidewater Terminal Co.
P.O. Box 806
Pasco, WA 99301

RE: Letter of Intent

Dear Mr. Jensen,

This letter represents Chevron Pipe Line Company's intent to respond as part of your Unified Command Structure to take part in oil spill response activities if requested to do so by your Company.

We will provide local personnel and equipment as available from our Pasco, WA facility to take part in oil spill response activities in the event of an oil spill in or around Tidewater's Pasco facility and associated local operations.

Sincerely,

Bryan Tucker
Vice President of Asset Management
Chevron Pipe Line Co.

APPENDIX C

Last Revised: 02/10/2014

HAZARD EVALUATION AND RISK ANALYSIS

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C.1 Facility Hazard Evaluation

C.2 Vulnerability Analysis

C.2.1 Analysis of the Potential for a Spill

Figure C.2-1 - Reportable Spill History

C.3 Spill Detection / Prevention Inspection

C.3.1 Spill Detection

C.3.2 Spill Prevention

Figure C.3-1 - Response Equipment Inspection

C.4 Trajectory Analysis

Figure C.4-1 - Trajectory Analysis

C.5 Discharge Scenarios

C.5.1 Worst Case Discharge (WCD) Scenario Discussion

C.5.2 Description of Factors Affecting Response Efforts

C.6 Planning Volume Calculations

C.7 Spill Volume Calculations

C.7.1 DOT / PHMSA Portion of Pipeline/Facilities

APPENDIX C
HAZARD EVALUATION AND RISK ANALYSIS, CONTINUED

C.7.2 ODEQ and WDOE Portion of the Facility

Figure C.7-1 - ODEQ / WDOE Worst Case Discharge (WCD) Calculations (in bbls)

Figure C.7-2 - WDOE Planning Volume Data

C.8 Product Characteristics and Hazards

Figure C.8-1 - Summary of Commodity Characteristics

Figure C.8-2 - Commodity Characteristics Additional Information

Figure C.8-3 - Material Safety Data Sheets (MSDS)

C.1 FACILITY HAZARD EVALUATION

A description of the operations covered by the plan is included in **FIGURE 1-2**. Refer to **APPENDIX C.2** below for a vulnerability analysis, including an analysis of the potential for a spill and reportable spill history.

C.2 VULNERABILITY ANALYSIS

A vulnerability analysis was performed to address the potential effects of an oil spill within the planning distance of this facility. Refer to **SECTION 6.7** for a detailed list of vulnerabilities. The following features may be impacted by a spill:

Water Intakes	Schools	Medical Facilities	Residential Areas	Businesses	Wetlands or other Sensitive Environments	Fish and Wildlife	Lakes and Streams	Endangered Flora and Fauna	Recreational Areas	Transportation Routes (air, land, water)	Utilities	Other Applicable Areas
x			x	x		x		x	x	x		x

C.2.1 Analysis of the Potential for a Spill

The probability of a spill occurring at this facility is minimal for the following reasons:

- Tanks are constructed in accordance with applicable engineering standards.
- Tank age is reviewed as a potential factor.
- Truck loading facilities are equipped with concrete pads and spill collection drain systems.
- All trucks are monitored during tank unloading procedures.
- Product transfers, involving pipeline or marine vessel activity, are monitored as required by government regulations.
- Facility tanks are inspected for evidence of corrosion and leaks according to applicable API 653 standards. Integrity and leak testing of buried piping is performed at the time of installation, modification, construction, relocation, or replacement. When a buried pipe section is exposed, it is examined, documented, and corrective actions are taken as necessary.
- Personnel are trained in procedures to prevent pollution.
- The horizontal range of a spill is dependent upon the topography and distance to the nearest water body described in more detail in **FIGURE C.4-1**.
- Natural disasters, such as earthquakes, tornadoes, and lightning strikes, are possible at this facility.
- Company personnel prepare for natural disasters by monitoring weather reports and warnings and taking appropriate safety precautions.
- The potential for a natural disaster is acknowledged, as appropriate, during drills and exercises. For example, flooding.
- Spill History is reviewed to understand historical conditions which lead to spills. After action investigations generate process upgrades to limit the potential of future incidents.

FIGURE C.2-1 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	None
Location (Equipment or Operations):	N/A
List of Discharge Causes:	N/A
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	N/A
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	N/A
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A
Brief Summary of the Impact of the Spill:	N/A
Geographic Area:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or a discharge into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities.

C.3 SPILL DETECTION / PREVENTION INSPECTION

C.3.1 Spill Detection

SPILL DETECTION
The Supervisory Control and Data Acquisition (SCADA) program provides for continuous monitoring and comparison of the metered volume in gallons delivered into the pipeline at point of origin versus the metered volume in gallons received from the pipeline at the destination. The system will alarm and shut down if the differential between these meter readings exceed 7.5 percent (%).The pipeline system will initiate an automatic ESD shutdown when Sump High Level and High High Level alarms at either the Snake River Pump Station #2 or the BN Receiving Station , or Tank A and Tank B High Level and High High Level alarms at the Pasco BN Terminal. On-call Tidewater management is notified in the event of an alarm and shutdown. A qualified operator inspects the pipeline system weekly. The operator reports suspect sightings on or in close proximity to the pipeline system to the on-call Tidewater Manager. Such sightings shall include, but are not limited to, suspected product releases, contractor and/or excavation activity, and suspicious vehicles or personnel in the vicinity of the pipeline system.

C.3.2 Spill Prevention

Programs designed to prevent emergencies include:

- Corrosion control programs,
- Preventative maintenance programs,
- Controller training programs,
- Operator training programs,
- 24-hour emergency telephone numbers,
- Supervisory control and data acquisition (SCADA) systems,
- Inspection programs,
- Emergency response drills,
- Maintaining containment systems around tankage,
- Membership in one-call organizations, and
- Public awareness programs.

The purpose of these programs is to prevent or mitigate a potential release and subsequent emergency response.

FIGURE C.3-1 - RESPONSE EQUIPMENT INSPECTION

Records are maintained on-site for five (5) years. Other versions of this form may be used. Refer to **APPENDIX G** for additional information.

ITEM	QUANTITY	LOCATION	TIME TO ACCESS/RESPOND	CONDITION	DATE USED/TESTED	SHELF LIFE	INSPECTION DATE

Inspector's Signature

C.4 TRAJECTORY ANALYSIS

FIGURE C.4-1 - TRAJECTORY ANALYSIS

Click to view/print Pipeline Trajectory Analysis

TIDEWATER
MORE THAN A BARGE LINE

Pasco Rail Diesel Line
Trajectory Map
Event + 48 Hours

Date/Time: Oct. 3, 2013 07:00Hrs
Floating: 93 Bbls
Beached: 108 Bbls
Evaporated/Dispersed: 181 Bbls

119°20'0"W 119°10'0"W 119°0'0"W 118°50'0"W

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

FIGURE C.4-1 - TRAJECTORY ANALYSIS, CONTINUED

Click to view/print Breakout Tank Trajectory Analysis

TIDEWATER
MORE THAN A BARGE LINE

Tidewater Snake River Terminal
Trajectory Map
Event + 48 Hours

Date/Time: Oct. 3, 2013 07:00Hrs
Floating: 31,102 Bbls
Beached: 899 Bbls
Evaporated/Dispersed: 13,276 Bbls

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

C.5 DISCHARGE SCENARIOS

The equipment and personnel to respond to a spill are available from several sources and are provided with the equipment and contractors in **SECTION 7.1** and **APPENDIX B**. The following sections are discussions of these scenarios.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion

APPENDIX C.7 provides worst case discharge calculations. Discussion of this scenario is as follows:

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

1. The spill observer would notify the Person-In-Charge (PIC) in accordance with **FIGURE 2-1.**
2. The Person-In-Charge would assume the role of Incident Commander until relieved and would initiate response actions and notifications in accordance with **SECTION 2.** If this were a small spill, the Person-In-Charge may handle all aspects of the response. The PIC may:
    - Conduct safety assessment in accordance with **FIGURE 2-1** and evacuate personnel as needed in accordance with **SECTION 2.**
    - Direct responders to shut down ignition sources.
    - Direct personnel to deploy containment boom in accordance with **SECTION 2.1.6.**
    - Complete spill report form in accordance with **SECTION 3.**
3. If this were a small or medium spill, the Qualified Individual/Incident Commander may elect the Person-In-Charge to remain the Incident Commander or to activate selected portions of the Spill Management Team (SMT). However, for a large spill, the Qualified Individual/Incident Commander would assume the role of Incident Commander and would activate the entire Spill Management Team in accordance with activation procedures described in **SECTION 4.2.**
4. The Qualified Individual/Incident Commander would then initiate spill assessment procedures including surveillance operations, trajectory calculations, and spill volume estimating in accordance with **SECTION 2.1.3.**
5. The Qualified Individual/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.
6. The Spill Management Team (SMT) would develop the following plans, as appropriate (some of these plans may not be required during a small or medium spill):
    - Health and Safety (**SECTION 5.5**)
    - Incident Action (**SECTION 5.4.1**)
    - Disposal (**SECTION 5.7**)
    - Site Security (**SECTION 5.8**)
    - Decontamination (**SECTION 5.6**)
    - Wildlife Rehabilitation (**SECTION 6.5**)
    - Alternative Response Strategies (**SECTION 6.4**)
    - Demobilization (**SECTION 5.10**)
7. The response would continue until an appropriate level of cleanup is obtained.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

The following table describes the Facility-specific worst-case discharge scenario and response resources.

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES
Scenario for a Worst Case Breakout Tank Discharge - (DOT/PHMSA/UTC/Ecology) (b) (7)(F), (b) (3) [redacted] satisfy the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration's (PHMSA), the Washington Utilities and Transportation Commission (UTC), and Washington Department of Ecology's (Ecology) worst-case discharge scenario requirements. PHMSA defines a worst case discharge as a catastrophic failure of the largest line section with the greatest capacity in a response zone or 50 percent (%) of the volume of the largest tank in each zone. Secondary containment in place at the facility allows the worst case discharge volume to be decreased by 50% under (b) (7)(F), (b) (3) [redacted] likelihood of the entire contents of a tank draining into the river is unlikely given that the facility is monitored on a 24-hour basis, the tanks are located more than 1,000 feet from the river, and considering the numerous spill containment features and devices in place. (b) (7)(F), (b) (3) [redacted] into the Upper Tank Farm's containment dike. The dike initially holds the release, but eventually fails at a weak point where repairs were underway allowing the contents of the tank to flow downhill and into the Snake River. The weather is cool and clear. Winds are from the north northeast to east northeast at 3 to 10 miles per hour (mph). The trajectory of the spill over the first 48 hours is provided in the plan. The trajectory is conservative and based on an instantaneous spill into the river. Day 1 07:00 A severe structural failure occurs near the point of attachment of the cargo transfer pipeline to Tank 2 in the Petroleum Tank Farm. The entire contents of Tank 2 flow from the tank into secondary containment. The dike wall initially holds, but eventually fails at a weak point where the dike was under repair and not completely recompacted. The product flows downgradient and into the Snake River. Soon after the incident, an Operator on duty observes diesel fuel extending several hundred feet into the Snake River and still trickling into the river from a scour in the shoreline. 07:05 The Operator immediately notifies the Operations Supervisor who assumes the assumes the role of Incident Commander (IC) and then: - Calls 911 to request assistance from the Benton and Franklin County Sheriff Departments and the Pasco, Walla Walla County, and Franklin County Fire Departments to cordon off and evacuate the area. - Requests the EHS&S Specialist to conduct air monitoring to confirm the spill area is safe to enter. - Activates SRT's spill response team. - Requests a status update of the remaining tanks in the Petroleum Tank Farm. - Initiates implementation of Tidewater's ICP by calling Dispatch and reporting information necessary to complete a Spill Report Form - Requests Dispatch to notify all available facility personnel to report to the CP. - Establishes a Command Post (CP) at SRT's main conference room.

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4, SECTION 7.1.1**, and **APPENDIX B.**

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED
07:10
(b) (7)(F), (b) (3)
health and safety concerns and Material Safety Data Sheets for No. 2 diesel are used to determine appropriate PPE. The EHS&S Specialist indicates vapor concentrations should be allowed to dissipate before actively conducting operations at the spill site. Initial hot zone boundaries are identified, and a decontamination zone is established near the spill site. 07:15 Dispatch completes a Spill Report Form and notifies company management and the required external agencies and potentially at risk nearby parties. External notifications include the: - National Response Center (NRC) - Washington Department of Emergency Management - Oregon Emergency Response System - U.S. Coast Guard - Sector Columbia River - U.S. Environmental Protection Agency - Region X - Washington Department of Ecology - Eastern and Central Regions - Oregon Department of Environmental Quality Nearby parties potentially at risk including Tri-Cities Grain, the Tesoro Terminal, Sacajawea, Hood, Two Rivers Parks, and McNary Dam are notified. The USCG is requested to evaluate and close necessary portions of the Snake and Columbia Rivers to marine traffic and restrict air space as appropriate. McNary Dam is requested to minimize flow rate and be prepared to close the fish ladder to the extent possible. The IC requests that all of Tidewater's spill response resources (i.e., personnel and equipment) staged at other facilities be alerted and mobilize to SRT as soon as practicable. The IC requests the Tri-County HazMat team mobilize to the facility and assist with hazard assessment and booming operations. 07:30 Facility response personnel begin to arrive at the CP and begin to populate their predetermined Incident Command System (ICS) positions. The IC directs the response team to: - Develop a site safety plan. - Delegate site security and evacuation responsibilities to the fire and police departments once they arrive. - Request security services to secure terminal and allow access only to response personnel. - Brief responding personnel with a description of the spill, relevant Material Safety Data Sheet (MSDS) information, and required PPE. - Assign continuing monitoring requirements to a qualified response team member. - Alert CRC to respond and assist with full-scale booming and operations at GRP locations downriver. - Activate O'Brien's Response Management to provide ICS support services at the CP. - Ready equipment available at SRT for immediate use in containing and recovering diesel on water as soon as vapor concentrations are reduced to acceptable levels. - Arrange for aerial surveillance through CRC with initial and periodic reporting to the IC regarding the movement of diesel and sheen on the water surface. - Arrange for trajectory analyses for predicting the leading edge of the spill and associated modelling to predict the volume of floating, beached, and evaporated/dispersed diesel. - Ready Tidewater's oily-water storage barges moored in Vancouver (i.e., the Glenn and Barge #4) and in Clarkston (i.e., Barge #7) for use and mobilize the barges to SRT. - Alert the International Bird Rescue. - Alert the Local Emergency Planning Commission (LEPC). - Dispatch personnel to shoreline access/viewing locations to assess spill movements.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

7:45

Calls are placed to the Umatilla Terminal, Boardman Container Terminal, and Tidewater Industrial Center (TIC) with a request to mobilize the nine additional response trailers located in Umatilla, Boardman, Hood River, Vancouver(2), Troutdale, Rainer, at Little Goose Dam, and Clarkston, three 1,200-foot boom caches staged at Vancouver, Boardman, and Umatilla, and all available response personnel to SRT.

Tri-County HazMat is alerted and asked to assist with the response. Tri-County HazMat mobilizes three response trailers, one each from Walla Walla, Kennewick, and Richland, with a combined 1,600 feet of boom.

CRC is alerted and asked to assist with the response. CRC initially mobilizes 2,000-foot and 4,200-foot boom trailers located in Boardman and Longview, respectively, and eight skimmers (i.e., two API drum skimmers, four 36-inch drum skimmers, and two Desmi Terminator 250 skimmers) from Portland, Longview, and Clatskanie, along with personnel to the site. Additional equipment is mobilized by CRC for scheduled arrival at +24 hours.

08:00

Vapor concentrations are decreased to safe levels. Response actions are initiated by SRT's spill response team to deploy boom and contain and recover diesel along the shoreline. The response team:
- Uses the 28-foot Lamplighter to deploy 300 feet of boom permanently stored on the water and attached at the downriver end of the Petroleum Dock to contain product moving downstream from the tank barge.
- Deploys the 1,200 feet of boom staged in the container unit at the Petroleum Dock to surround the tank barge.
- Ask Tesoro Terminal personnel to deploy 1,200 feet of boom maintained on a reel at their dock, located approximately 3,000 feet downriver, to divert and recover diesel.
- Mobilizes equipment from the facility's dedicated response trailer and deploy an additional 600 feet of boom downriver from the spill at GRP MSN 1.1, just upriver from the railroad bridge, to divert and recover product.
- Uses the Douglas 2-inch Skim Pak skimmer in the response trailer, with a derated capacity of 480 bpd, to begin recovery of spilled product inside the containment/collection boom.
- Uses the 29-bbl Port-a-Tank from the facility's response trailer to store recovered oily water, and arrange for two 80-bbl vacuum trucks from NRCES to transfer recovered oily water from the Port-a-Tank to SRT
- Transloads the oily water from the vacuum trucks into Tidewater's on-water storage barge, Barge #1, with a capacity of 25,083 bbl.

8:30

Response trailers arriver from Umatilla and Boardman within an hour. Additional boom is deployed at GRP MSN-0.6 so as to divert diesel into the Sacajawea State Park boat launch basin for recovery and at GRP MSN-0.55 to deflect product away from the Sacajawea Park shoreline. Recovery operations are ordered for the collection boom at GRPs MSN 1.1 and GRP 0.6 using skimming and portable storage equipment mobilized in the response trailers from Umatilla and Boardman.

Tri-County HazMat deploys 1,600 feet of boom downriver from the railroad bridge in an en echelon step down fashion so as to divert diesel into the launch basin.

Barge #1 is readied for use to store oily-water mixtures generated during the recovery action. The oily water is transferred from the temporary storage using vacuum trucks ordered from NRCES and Safety Kleen and transported to SRT where pumps and equipment dedicated to the terminal are used to transfer to mixture to Barge #1.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

11:30

The remaining Tidewater response trailers and equipment initially mobilized by CRC begins to arrive at +4 hours. Initial trajectory analyses indicate the leading edge of the spill will be past the confluence of the Snake and Columbia Rivers at +12 hours with impacts to the shorelines on both shorelines of the Snake River and mostly along the east shoreline of the Columbia River at Finley.

Using resources from the Tidewater trailers and that equipment mobilized by CRC, exclusion and deflection booming is deployed to protect sensitive environments at Hood Park, Two Rivers Park, and at the many small coves and inlets located along the shorelines of the Columbia River just downriver from its confluence with the Snake River (b) (3), (b) (7)(F) [redacted].

12:00

Recovery operations within the collection boom deployed at the spill site, at the Tesoro Terminal, and at GRPs MSN 1.1 and GRP 0.6 (i.e., the Sacajawea Park launch basin) continues. Recovery rates are substantially increased by the addition of the high capacity drum and weir skimmers mobilized to the site by CRC.

13:00

Representatives from DEQ, Ecology, EPA, and the USCG arrive at the CP and meet with the IC. A briefing is conducted regarding the incident and the follow up response objectives, status, and strategies. Local media is in attendance.

14:00

A press conference is conducted with Tidewater, DEQ, Ecology, EPA, and the USCG in attendance. A press release is issued by the IC.

16:00

Follow-up communications are conducted to notify previously contacted agencies and potentially at-risk parties of response operation activities.

17:00

Portable skimming actions and boom maintenance continue to the extent practicable throughout the night. At the conclusion of the day, 19 GRPs were deployed at locations between the spill site and the sensitive environments past the confluence of Snake and Columbia Rivers. Portable skimmers are effective in recovering diesel at the spill site and at the three downriver locations in close proximity to the spill site. Total on-site equipment is as follows:

Total storage = 25,515 bbl
Total estimated daily recovery rate (EDRC) = 17,278 bpd
Total boom = 17,400 feet

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Day 2

06:00

Full-scale booming operations of GRPs and recovery operations at the spill site continue. On-water recovery operations utilize additional equipment mobilized to the spill by CRC. Trajectory analyses at +48 hours indicate the leading edge of the spill may reach the McNary Dam with the most severe impacts and concentrations of floating diesel at Juniper Canyon area. Under the current wind conditions, impacts are expected to be greatest on the west side of the Columbia River shoreline (i.e., the Washington side) until the river turns to the west and impacts shift to the southern shorelines (i.e., the Oregon side).

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:

(b) (7)(F), (b) (3) [redacted]

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

To stay ahead of where the leading edge may possibly move over the next 24 hours, CRC activates 14,000 feet of additional boom mobilized from Portland, Vancouver, and Wauna and seven work boats mobilized from Portland, St. Helens, Longview, and Astoria to deploy boom from where booming activity concluded at the end of Day 1 to the McNary Dam (b) (3), (b) (7)(F) [redacted]. These GRPs include the shoreline adjacent McNary National Wildlife Refuge, the mouth of the Walla Walla River, adjacent wetlands at Juniper Canyon and Hat Rock State Park, and the Fish Ladder at McNary Dam. The Fish Ladder is double boomed and lined with absorbent pads and sweeps.

The City of Hermiston's pumping station, located approximately 2,000 feet upriver from the dam, is also boomed. Boom near the dam is deployed in an en echelon step down fashion so at to divert diesel to the McNary Dam boat ramp located on the south upriver side of the dam, a natural collection point with easy access for effective skimming. Resources used to deploy these GRPs are staged the existing Hood Park staging area, as well as at additional staging areas established at Port Kelly, Hat Rock State Park, and McNary Dam boat ramp.

CRC mobilized two OSRVs from Portland, the M/V MFSA 1 and the M/V HW Zarling, with a combined recovery rate of 7,440 bpd, and six shallow water recovery barges from Portland (3), Vancouver, Longview, Clatskanie, and Astoria, with a combined recovery rate of 12,365 bpd. The OSRVs are deployed along the leading edge of the spill and where on-water accumulation is greatest. Additionally, three additional NRCES disc/weir skimmers mobilized from Tacoma, Seattle, Anacortes, and Port Angeles to further augment skimming capabilities. The addition of the OSRVs, shallow water recovery barges, and skimmers increases the rate of recovery to in excess of 42,000 bpd.

10:00

A press release is issued by Tidewater's Public Information Officer (PIO) describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

11:00

Oiled birds are encountered and arrangements are made with International Bird Rescue and CRC to set up and establish a bird cleaning and rehabilitation center at Sacajawea State Park. These activities are monitored by the Washington Department of Fish and Wildlife (DFW).

13:00

Tidewater's oily-water storage barges mobilized from Vancouver, the Glenn and Barge #4, arrive and supplement on-water storage already provided by Barge #1. The Glenn and Barge #4 are positioned midway between SRT and the McNary Dam near Point Kelly and at the McNary Dam.

14:00

A press conference is conducted with Tidewater, DEQ, Ecology, and the USCG in attendance. A press release is issued by the IC.

17:00

On-water recovery actions are concluded due to darkness. Portable skimming and boom maintenance is conducted to the extent practicable throughout the night. At the conclusion of the day, 9 additional GRPs were deployed at locations between the Cowlitz River and Fisher Island. On-water recovery was conducted near the spill site and at the leading edge of the spill. Total on-site equipment is as follows:

Total storage = 67,073 bbl
Total EDRC = 42,276 bpd
Total boom = 33,400 feet

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

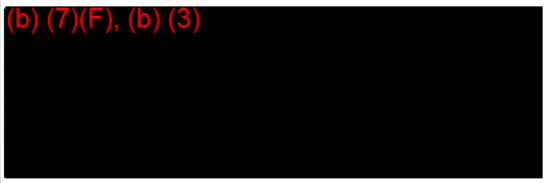
Day 3

06:00

At first light, full scale on-water recovery operations continue in an effort to minimize the volume of diesel that potentially can reach the dam. On-water recovery operations utilize additional equipment mobilized to the spill by CRC. Trajectory analyses at +72 hours indicate diesel will accumulate at the McNary Dam boat ramp given the wind conditions that push diesel on the water to the southern shoreline along the Oregon side.

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:



Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

07:00, Continued

CRC activates 15,000 feet of additional boom mobilized from St. Helens, Longview, and Astoria and three NRCES workboats from Rainier, Westport, and Portland. The boom is used to effectively divert diesel into McNary Dam boat ramp area where skimming capabilities are substantially increased with the arrival of NRCES resources activated by CRC from Seattle, Ferndale, Neah Bay, and Port Angeles areas. These resources include the OSRVs M/V NRC Columbia and M/V Cape Flattery, an ORB disc skimmer, and seven belt/brush/weir skimmers, all capable of high capacity skimming operations. Tidewater's oily-water storage barge, Barge #7, arrives from Clarkston to support skimming operation through providing additional on-water storage.

A press release is issued by Tidewater's PIO describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

08:00

Oiled bird rehabilitation efforts continue at the bird cleaning and rehabilitation center at Sacajawea State Park, under the oversight of DFW.

14:00

A press conference is conducted with Tidewater, DEQ, Ecology, and the USCG in attendance. A press release is issued by the IC.

17:00

On-water recovery actions are concluded due to darkness. Portable skimming actions and boom maintenance continue to the extent practicable throughout the night. At the conclusion of the day, all GRPs between the spill site and the McNary Dam have been deployed. On-water and portable skimming operations were conducted near the spill site and at the leading edge of the spill. Preparations are complete for skimming at the McNary Dam boat ramp area. Total on-site equipment is as follows:

Total storage = 81,842 bbl
Total EDRC = 88,041 bpd
Total boom = 48,400 feet

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

Day 4

06:00

At first light, full scale on-water recovery operations continue in an effort to minimize the volume of diesel that potentially can reach the dam. Trajectory analyses at +96 hours indicate diesel will accumulate at the McNary Dam boat ramp given the wind conditions that push diesel on the water to the southern shoreline along the Oregon side. Resources initially deployed earlier in the response, and no longer needed in their initial location, are cascaded downriver for use in the day's recovery activities.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:

(b) (7)(F), (b) (3) [redacted]

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

A press release is issued by Tidewater's PIO describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

17:00

On-water recovery actions are concluded due to darkness. Portable skimming actions and boom maintenance continue to the extent practicable throughout the night.

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

Day 5

06:00

At first light, full scale recovery operations continue in an effort to minimize the volume of diesel that potentially can reach the dam. The recovery effort focuses on the McNary Dam boat ramp area where the leading edge of the spill is accumulating. Resources initially deployed earlier in the response, and no longer needed in their initial location, are cascaded downriver for use in the day's recovery activities.

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:

(b) (7)(F), (b) (3) [redacted]

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

17:00

On-water recovery actions are concluded due to darkness. Portable skimming actions and boom maintenance continue to the extent practicable throughout the night.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

18:00
Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

Day 6

06:00

Aerial and on-water observations indicate an absence of significant diesel on water. Recovery operations continue at the McNary Dam boat ramp and upriver to address sheens and small pockets of diesel that may continue to move downriver.

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:

(b) (7)(F), (b) (3) [redacted]

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

A press release is issued by Tidewater's PIO describing the spill status and follow-up actions taken to protect sensitive environments.

18:00

Members of Tidewater's response team complete daily documentation of the incident and submits the documents to the IC. Planning for the next operational period continues. Shoreline cleanup plans are being developed. Shoreline cleanup plans are being developed.

Day 7 and After

On-water recovery operations are discontinued in the absence of significant oil on the water. Sorbent sweeps will be used to address remaining sheen where present. Aerial surveillance indicates that sheen has generally dissipated with only minor sheens being present in water adjacent to impacted shoreline where work will continue throughout the days ahead. Most recovery equipment is demobilized. Much of the boom and response crews are demobilized.

Cleanup of impacted shorelines is conducted by flushing diesel into boomed areas where it is recovered with portable skimmers or sorbents, or allowed to naturally dissipate. Upon completion of operations, demobilization is authorized by the USCG, EPA, Ecology, DEQ, and trustee agencies. Impacted areas are periodically monitored to evaluate the long term effectiveness of the cleanup actions.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Worst Case Discharge Equipment Summary

Organization | Asset | WRRL # | Homebase | Boom (ft) | EDRC (bpd) | Storage (bbl):

Day 1

TBL | Cont. Sys | 28902 | Umatilla | 1200 | 0 | 0
TBL | Cont. Sys | 28904 | Pasco | 1200 | 0 | 0
TBL | Trailer F, Aftech | 28903 | Pasco | 600 | 0 | 0
TBL | Trailer E1, Aftech | 28905 | Little Goose Dam | 600 | 0 | 0
TBL | Aftech | 28901 | Umatilla | 600 | 0 | 0
TBL | Trailer B1, Aftech | 28900 | Boardman | 600 | 0 | 0
TBL | Trailer D1, Aftech | 28899 | Hood River | 600 | 0 | 0
TBL | Barge #1 | 30049 | Pasco | 0 | 0 | 25083
TBL | Trailer E1, Trailer | 29027 | Little Goose Dam | 0 | 0 | 0
TBL | Trailer F | 29026 | Pasco | 0 | 0 | 0
TBL | Trailer | 29025 | Umatilla | 0 | 0 | 0
TBL | Trailer B1, Trailer | 29024 | Boardman | 0 | 0 | 0
TBL | Trailer D1, Trailer | 29023 | Hood River | 0 | 0 | 0
TBL | Tri-Cities Voyager, 15' Boom Boat | 28995 | Barge Tri-Cities Voyager | 0 | 0 | 0
TBL | 28' Boat - Lamplighter | 28991 | Pasco | 0 | 0 | 0
TBL | 14 Boat | 28987 | Pasco | 0 | 0 | 0
TBL | 14' Boat | 28986 | Pasco | 0 | 0 | 0
TBL | 14' Boat | 28985 | Umatilla | 0 | 0 | 0
TBL | Trailer E1, 15' Boom Boat | 28983 | Little Goose Dam | 0 | 0 | 0
TBL | Trailer F, 15' Boom Boat | 28982 | Pasco | 0 | 0 | 0
TBL | 15' Boom Boat | 28981 | Umatilla | 0 | 0 | 0
TBL | Trailer B1, 15' Boom Boat | 28980 | Boardman | 0 | 0 | 0
TBL | Trailer D1, 15' Boom Boat | 28979 | Hood River | 0 | 0 | 0
TBL | Trailer B1, Douglas 2" Skim Pak | 28965 | Boardman | 0 | 480 | 0
TBL | Douglas 2" Skim Pak | 28966 | Umatilla | 0 | 480 | 0
TBL | Trailer F, Douglas 2" Skim Pak | 28967 | Pasco | 0 | 480 | 0
TBL | Trailer E1, Douglas 2" Skim Pak | 28968 | Little Goose Dam | 0 | 480 | 0
TBL | Tri-Cities Voyager, Douglas 2" Skim Pak | 28972 | Barge Tri-Cities Voyager | 0 | 480 | 0
TBL | Douglas 2" Skim Pak | 28973 | Pasco | 0 | 480 | 0
TBL | Trailer B1, Port-a-Tank | 28921 | Boardman | 0 | 0 | 29
TBL | Trailer F, Port-a-Tank | 28922 | Pasco | 0 | 0 | 29
TBL | Trailer E1, Port-a-Tank | 28923 | Little Goose Dam | 0 | 0 | 29
TBL | Port-a-Tank | 28924 | Umatilla | 0 | 0 | 29
TBL | Trailer D1, Port-a-Tank | 28920 | Hood River | 0 | 0 | 29
CRC | 20" Boom | 30051 | Boardman | 2000 | 0 | 0
CRC | API Drum Skimmer | 29087 | Longview | 0 | 2400 | 0
CRC | API Drum Skimmer | 29088 | Clatskanie | 0 | 2400 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 544-56) | 29121 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 545-56) | 29122 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 546-56) | 29123 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 547-56) | 29124 | Longview | 0 | 891 | 0
CRC | Desmi Terminator 250 | 29089 | Portland | 0 | 3017 | 0
CRC | Desmi Terminator 250 | 29090 | Portland | 0 | 3017 | 0
TBL | Trailer G1 | 29019 | Rainier | 0 | 0 | 0
TBL | Trailer J | 29020 | Vancouver | 0 | 0 | 0
TBL | Trailer I | 29021 | Vancouver | 0 | 0 | 0
TBL | Aftech | 28897 | Vancouver | 1200 | 0 | 0
TBL | Trailer G1, Aftech | 28895 | Rainier | 600 | 0 | 0
TBL | Trailer J, Aftech | 28896 | Vancouver | 600 | 0 | 0
TBL | Trailer I, Aftech | 28898 | Vancouver | 600 | 0 | 0
TBL | Trailer C1, Aftech | 28906 | Clarkston | 600 | 0 | 0
TBL | Trailer H | 30966 | Troutdale | 600 | 0 | 0

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Worst Case Discharge Equipment Summary

Organization | Asset | WRRL # | Homebase | Boom (ft) | EDRC (bpd) | Storage (bbl):

Day 1, Continued

CRC | 20" Boom | 29129 | Longview | 4200 | 0 | 0
TBL | Trailer G1, Port-a-Tank | 28916 | Rainier | 0 | 0 | 29
TBL | Trailer J, Port-a-Tank | 28917 | Vancouver | 0 | 0 | 29
TBL | Trailer I, Port-a-Tank | 28918 | Vancouver | 0 | 0 | 29
TBL | Trailer H, Port-a-Tank | 28919 | Troutdale | 0 | 0 | 29
TBL | Trailer C1, Port-a-Tank | 28925 | Clarkston | 0 | 0 | 29
TBL | Pillow Tank | 28926 | Vancouver | 0 | 0 | 71
TBL | Pillow Tank | 28927 | Vancouver | 0 | 0 | 71
TBL | Trailer H | 29022 | Troutdale | 0 | 0 | 0

Day 2

CRC | 20" Boom | 29181 | Portland | 4000 | 0 | 0
CRC | 20" Boom | 29127 | Vancouver | 5000 | 0 | 0
CRC | 20" Boom | 29130 | Wauna | 5000 | 0 | 0
CRC | FRV Columbia Responder | 29029 | Astoria | 0 | 0 | 0
CRC | FRV Independence | 29030 | Longview | 0 | 0 | 0
CRC | FRV Protector | 29031 | St. Helens | 0 | 0 | 0
CRC | 21' Workboat | 29038 | Portland | 0 | 0 | 0
CRC | 20' Workboat | 29039 | Portland | 0 | 0 | 0
CRC | Elizabeth Furse | 29040 | Portland | 0 | 0 | 0
CRC | 20' Workboat | 29157 | Portland | 0 | 0 | 0
CRC | Shallow Water Recovery Barge | 29050 | Vancouver | 0 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29052 | Astoria | 400 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29053 | Longview | 400 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29054 | Portland | 400 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29055 | Clatskanie | 400 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29057 | Longview | 400 | 2473 | 100
NRCES | Disc Skimmer/ Power Pack | 28223 | Port Angeles | 0 | 686 | 0
NRCES | Storage Shed, Disc Skimmer/ Power Pack | 28224 | Tacoma, TFW | 0 | 686 | 0
NRCES | Container, Disc Skimmer/ Power Pack | 28225 | Anacortes | 0 | 686 | 0
NRCES | Warehouse, Brush/Weir Skimmer | 28226 | Seattle, South Park | 0 | 662 | 0
TBL | Tank Barge # 4 | 28914 | Vancouver | 0 | 0 | 12958
TBL | Glenn | 30971 | Vancouver | 0 | 0 | 28000
CRC | Wildlife Transport Trailer | 29163 | Portland | 0 | 0 | 0
CRC | Wildlife Rehabilitation Trailer | 29170 | Portland | 0 | 0 | 0
CRC | Wildlife Rehabilitation Shelter | 29046 | Portland | 0 | 0 | 0
CRC | OSRV HW Zanling | 29032 | Portland | 0 | 3720 | 24
CRC | OSRV MFSA 1 | 29034 | Portland | 0 | 3720 | 24

Day 3

CRC | 20" Boom | 29131 | Longview | 5000 | 0 | 0
CRC | 20" Boom | 29135 | Astoria | 5000 | 0 | 0
CRC | 20" Boom | 29139 | St. Helens | 5000 | 0 | 0
NRCES | WB- Raider 6028 | 28575 | Portland | 0 | 0 | 0
NRCES | WB- Beaver 6026 | 28576 | Westport | 0 | 0 | 0
NRCES | FRV 1, Kvichak | 28565 | Rainier, FMC | 0 | 0 | 0
CRC | Slickbar "High Capacity Oil Skimmer" | 29115 | Vancouver | 0 | 4457 | 0
NRCES | Brush/DrumSkimmer | 28215 | Portland | 0 | 662 | 0
NRCES | Brush/Drum Skimmer | 28216 | Portland | 0 | 662 | 0
NRCES | Disc Skimmer | 28218 | Portland | 0 | 480 | 0

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED
Worst Case Discharge Equipment Summary Organization | Asset | WRRL # | Homebase | Boom (ft) | EDRC (bpd) | Storage (bbl): Day 3, Continued NRCES | Trailer 24', Port Angeles, Wier Skimmer | 28253 | Port Angeles | 0 | 3017 | 0 NRCES | Warehouse, Disc Skimmer | 29795 | Seattle, South Park | 0 | 888 | 0 NRCES | Trailer Pier 90, Brush Skimmer | 28214 | Seattle, Pier 90 | 0 | 3019 | 0 NRCES | Container Hoquiam, Brush Skimmer | 28213 | Aberdeen | 0 | 3019 | 0 NRCES | Trailer 24' Pier 90, Wier Skimmer | 28252 | Seattle, Pier 90 | 0 | 3017 | 0 NRCES | South Park, Wier Skimmer | 28258 | Seattle, South Park | 0 | 5465 | 0 NRCES | OSRV Cape Flattery, Brush Skimmer | 28259 | Neah Bay | 0 | 2427 | 0 NRCES | ORB, disc skimmer | 30822 | Neah Bay | 0 | 9600 | 0 NRCES | OSRV NRC Columbia, Lori Brush Skimmer | 30459 | Ferndale | 0 | 9052 | 0 TBL | Tank Barge #7 | 28915 | Clarkston | 0 | 0 | 14769

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Scenario for a Worst Case Pipeline Segment Discharge - (DOT/PHMSA/UTC)

This scenario describes a hypothetical incident and response and is intended to demonstrate how the Tidewater's response team would respond to a pipeline segment worst case discharge. It is provided to satisfy the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration's (PHMSA) and the Washington Utilities and Transportation Commission (UTC) requirements that define a worst case pipeline segment discharge based on the pipeline's (b) (7)(F), (b) (3)

In this scenario, a pipeline leak results in approximately 383 bbl of No. 2 diesel being released along the pipeline near the corner of Sacajawea Park Rd & S. Rd 40 E, where the pipeline begins to parallel the Burlington Northern's (BN) mainline. The resulting spill enters a stormwater detention basin north of the rail line, drains beneath the rail line through a connecting storm sewer pipe and into another stormwater detention basin on the south side of the rail line, then into a canal along the northwest side of Sacajawea State Park that drains to the Columbia River. The weather is cool and clear. Winds are from the north northeast to east northeast at 3 to 10 miles per hour (mph). Note that, even in the event of a complete pipeline failure as described in this incident, the likelihood of the entire pipeline contents draining into the Columbia River is unlikely given the failsafe redundant supervisory control and data acquisition (SCADA) system is in place on the pipeline system, the pipeline is located 3,000 feet from the river, and that a recent field check failed to identify a connection between the stormwater depressions adjacent the main line (i.e., the release would likely be contained in the detention basin adjacent the pipeline).

Day 1

06:45

During a transfer of No. 2 diesel fuel from Tidewater's Snake River Terminal (SRT) to BN's railyard, the Pasco Rail Diesel Pipeline system's SCADA system detects a difference between the metered volume at the point of origin and point of destination (i.e., exceeding 7.5%). The system automatically alarms, shuts down the transfer pump, and closes valve on the discharge side of the pump at SRT.

06:50

The Operator immediately responds to the alarm and verifies the system shut down. The Operator notifies the Operations Supervisor. The Operations Supervisor assumes the role of Incident Commander (IC) and then:
- Requests an advance team of Operators to inspect the pipeline right of-way.
- Requests the EHS&S Specialist to conduct air monitoring to confirm the areas to be inspected are safe to enter.
- Instructs the BN Operator to close the block valve to isolate the pipeline segment from BN's storage tanks.

07:00

The Operator leading the advance team inspects the pipeline right-of-way and discovers an area of stained soil near the corner of Sacajawea Park Rd & S. Rd 40 E. The area measures approximately 20 feet in diameter and has a strong diesel odor. Diesel fuel is seeping out of the embankment into the adjacent stormwater detention basin and is ponding in the low point. Inspection of the stormwater detention basin on the other side of the mainline shows diesel draining into the drainage canal and moving downstream. A storm sewer pipe apparently connects the two detention basins. The Operator calls and updates the Operations Supervisor. The Operations Supervisor then
- Calls 911 to request assistance from the Benton and Franklin County Sheriff Departments and the Pasco, Walla Walla County, and Franklin County Fire Departments to cordon off and evacuate the area.
- Activates SRT's spill response team.
- Requests a status update for spill volume and the drainage canal where it enters the Columbia River at Sacajawea State Park (i.e., at the pedestrian bridge).
- Initiates implementation of Tidewater's ICP by calling Dispatch and reporting information necessary to complete a Spill Report Form
- Requests Dispatch to notify all available facility personnel to report to the CP.
- Establishes a Command Post (CP) at SRT's main conference room.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

07:10

The IC receives a status update regarding the spill. Initial estimates indicate approximately 386 bbl of diesel fuel were released. Observations from pedestrian bridge indicate diesel fuel extends several hundred feet into the Columbia River and is still entering the river from the creek under the pedestrian bridge. There is no other damage to the pipeline system. An initial assessment of site health and safety concerns and Material Safety Data Sheets for No. 2 diesel are used to determine appropriate PPE. The EHS&S Specialist indicates vapor concentrations should be allowed to dissipate before actively conducting operations at the spill site. Initial hot zone boundaries are identified, and a decontamination zone is established near the spill site.

07:15

Dispatch completes a Spill Report Form and notifies company management and the required external agencies and potentially at risk nearby parties. External notifications include the:
- National Response Center (NRC)
- Washington Department of Emergency Management
- Oregon Emergency Response System
- Washington Utilities and Transportation Commission
- U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration
- U.S. Coast Guard - Sector Columbia River
- U.S. Environmental Protection Agency - Region X
- Washington Department of Ecology - Eastern and Central Regions
- Oregon Department of Environmental Quality

Nearby parties potentially at risk including the Sacajawea and Two Rivers Parks, City of Pasco, McNary Wildlife Refuge, and McNary Dam are notified. The USCG is requested to evaluate and close necessary portions of the Snake and Columbia Rivers to marine traffic and restrict air space as appropriate. McNary Dam is requested to minimize flow rate and be prepared to close the fish ladder to the extent possible.

The IC requests that all of Tidewater's spill response resources (i.e., personnel and equipment) staged at other facilities be alerted and mobilize to SRT as soon as practicable. The IC requests the Tri-County HazMat team mobilize to the facility and assist with hazard assessment and booming operations.

07:30

Facility response personnel begin to arrive at the CP and begin to populate their predetermined Incident Command System (ICS) positions. The IC directs the response team to:
- Develop a site safety plan.
- Delegate site security and evacuation responsibilities to the fire and police departments once they arrive.
- Request security services to secure terminal and allow access only to response personnel.
- Brief responding personnel with a description of the spill, relevant Material Safety Data Sheet (MSDS) information, and required PPE.
- Assign continuing monitoring requirements to a qualified response team member.
- Alert National Response Corporation Environmental Services (NRCES) to respond and assist with full-scale shoreside cleanup.
- Alert Clean Rivers Cooperative, Inc. (CRC) to respond and assist with full-scale on-water booming and operations at geographical response plans (GRP) locations downriver.
- Activate O'Brien's Response Management to provide ICS support services at the CP.
- Alert an environmental consultant to respond and assist with soil sampling associated with shoreside cleanup.
- Ready equipment available at SRT for immediate use in containing and recovering diesel on water as soon as vapor concentrations are reduced to acceptable levels.
- Arrange for aerial surveillance through CRC with initial and periodic reporting to the IC regarding the movement of diesel and sheen on the water surface.
- Arrange for trajectory analyses for predicting the leading edge of the spill and associated modelling to predict the volume of floating, beached, and evaporated/dispersed diesel.
- Ready Tidewater's oily-water storage barge moored at SRT, Barge #1, for use. Alert the International Bird Rescue.
- Alert the Local Emergency Planning Commission (LEPC).
- Dispatch personnel to shoreline access/viewing locations to assess spill movements.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

07:45

Calls are placed to the Umatilla Terminal, Boardman Container Terminal, and Tidewater Industrial Center (TIC) with a request to mobilize the nine additional response trailers located in Umatilla, Boardman, Hood River, Vancouver(2), Troutdale, Rainer, at Little Goose Dam, and Clarkston, three 1,200-foot boom caches staged at SRT and the Umatilla Terminal, and all available response personnel to SRT.

Tri-County HazMat is alerted and asked to assist with the response. Tri-County HazMat mobilizes three response trailers, one each from Walla Walla, Kennewick, and Richland, with a combined 1,600 feet of boom.

NRCES is alerted and asked to assist in the response. NRCES initially mobilizes equipment from the Pasco office including an emergency response truck/trailer, two gear truck, a 70 bbl liquid vacuum truck, an air mover truck, an air monitoring meter, sorbent pads, boom, and sweep, a multi-gas meter for air monitoring, and necessary responders, all scheduled to arrive within less than +1 to +2 hours. Additional equipment is mobilized from Spokane and Seattle for arrival in +4 and +6 hours, respectively.

CRC is alerted and asked to assist with the response. CRC initially mobilizes 2,000-foot and 4,200-foot boom trailers located in Boardman and Longview, respectively, and eight skimmers (i.e., two API drum skimmers, four 36-inch drum skimmers, and two Desmi Terminator 250 skimmers) from Portland, Longview, and Clatskanie, along with personnel to the site. Additional equipment is mobilized by CRC for scheduled arrival at +24 hours.

08:00

Vapor concentrations are decreased to safe levels. Response actions are initiated by SRT's spill response team to deploy boom and contain and recover diesel along the shoreline. The response team:
- Mobilize the 28-foot Lamplighter and equipment from the facility's dedicated response trailer and deploy 600 feet of containment boom where the creek enters the Columbia River.
- Mobilize 1,200 feet of boom from facility's container unit and deploy boom across the creek at the pedestrian bridge, upstream in the drainage canal at the pump station near SE Road 36, and further up the drainage canal where it goes under at E Ainsworth Street.
- Use the Douglas 2-inch Skim Pak skimmer in the response trailer, with a derated capacity of 480 bpd, to begin recovery of spilled product inside the containment/collection boom.
- Use the 29-bbl Port-a-Tank from the facility's response trailer to store recovered oily water, and arrange for a 70-bbl vacuum trucks from NRCES to transfer recovered oily water from the Port-a-Tank to SRT
- Transload the oily water from the vacuum trucks into Tidewater's on-water storage barge, Barge #1, with a capacity of 25,083 bbl when needed.

08:30

Initial resources mobilized to the site by NRCES from Pasco arrive including an emergency response truck, gear truck, air monitoring equipment, and a supply of sorbent pads, boom, and sweep. After air monitoring confirms the area is safe to enter, NRCES responders apply sorbent pads, boom, and sweep at the pipeline break, in the stormwater detention basins, and behind the boom deployed by Tidewater in the drainage canal and creek.

08:45

Tidewater response trailers arriver from Umatilla and Boardman and from Tri-County HazMat within an hour. Additional boom is deployed downriver from the creek at GRP M 324.8, 324.65, 324.4, and 324.0 near Two Rivers Park. Recovery operations are ordered for the collection boom at the creek using skimming and portable storage equipment mobilized in the response trailers from Umatilla and Boardman.

Barge #1 is readied for use to store oily-water mixtures generated during the recovery action. Oily water will be transferred from the temporary storage using vacuum trucks ordered from NRCES and transported to SRT where pumps and equipment dedicated to the terminal are used to transfer the mixture to Barge #1.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED
09:45 Additional resources mobilized to the site by NRCES from Pasco arrive including an excavator, emergency response trailer, gear truck, 70-bbl liquid vacuum truck, air mover truck, and additional sorbents. The vacuum and air mover trucks are used to recover free product standing in the stormwater retention basins and behind boom deployed on the drainage canal/creek. They are prepared to assist with transfer of oily-water mixtures recovered from on-water operations at the mouth of the creek. The excavator is used to create an earthen dam to prevent any more diesel from entering the drainage canal. 11:30 The remaining Tidewater response trailers and equipment initially mobilized by CRC begins to arrive at +4 hours. Initial trajectory analyses indicate the leading edge of the spill will be at Wallula Junction and Point Kelly where the Walla Walla River enters the Columbia River in +24 hours. Shoreline impacts are primarily predicted along the spit of land extending into the river at the McNary National Wildlife Refuge and at Point Kelly. Using resources from the Tidewater trailers and that initially mobilized by CRC, exclusion and deflection booming is deployed to protect sensitive environments present in the many small coves and inlets located along the shorelines of the Columbia River just downriver from its confluence with the Snake River (i.e., MSN-0.5 and M-323.6, 323.5, 323.2, 323.3, 322.9, 322.75, 322.5, 322.3, 322.1, and 321.7). 12:00 Recovery operations within the collection boom deployed at the creek and inside the drainage canal continues. Recovery rates are substantially increased by the addition of the high capacity drum and weir skimmers mobilized to the site by CRC. 13:00 Representatives from DEQ, Ecology, EPA, and the USCG arrive at the CP and meet with the IC. A briefing is conducted regarding the incident and the follow up response objectives, status, and strategies. Local media is in attendance. 13:45 Within +6 hours, the NRCES equipment mobilized from Spokane and Seattle arrives. This equipment includes six gear trucks, two excavators, two 120-bbl vacuum tractor trailers, three 20-yd roll off trucks/boxes, four Vactor/Supersucker trucks, six 20,000-gal portable tanks, and a substantial supply of sorbent materials including 65 bales of oil sorbent pads, 55 bales of 5 inch oil sorbent boom, 58 bales of 100-foot oil sorbent sweep, and 5 bales of 8-inch oil sorbent boom. NRCES constructs an interceptor trench at the embankment where diesel is leaking into the stormwater retention basin. Exploratory pot holes are used to define the lateral and vertical extent of affected soil extending from the pipeline to the embankment. Trenching is conducted to segregate obviously affected soil which is stockpiled on plastic and bermed or placed in roll off boxes. Vacuum trucks are used to remove diesel from the potholes and interceptor trenches, after which it is transferred to the portable tanks mobilized to the site. Generous use of sorbent materials mobilized to the site by NRCES enhances shoreside recovery of spilled diesel. Environmental consultants arrive and assist with the shoreside delineation of affected soil. The consultants field screen soil samples for the presence of hydrocarbon using visual, water sheen, and headspace gas testing. Representative samples are collected from the extents of the excavations for laboratory analyses. Samples are also collected from stockpiled affected soil for characterization and disposal purposes.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

14:00

A press conference is conducted with Tidewater, Ecology, EPA, and the USCG in attendance. A press release is issued by the IC.

16:00

Follow-up communications are conducted to notify previously contacted agencies and potentially at-risk parties of response operation activities.

17:00

Portable skimming actions and boom maintenance continue to the extent practicable throughout the night. Shoreside recovery actions continue using portable lighting. At the conclusion of the day, 15 GRPs were deployed at locations between the spill site and the sensitive environments downriver. Vacuum trucks and portable skimmers are effective in recovering diesel at the spill site, behind boom in the drainage canal/creek, and where the creek flows into the Columbia River. Total on-site equipment is as follows:

Storage = 25,515 bbl
Estimated Daily Recovery Rate (EDRC) = 17,278 bpd
Boom = 17,400 feet
Gear Trucks - 8
Emergency Response Trailers - 2
Liquid Vacuum, Air Mover, Vacuum Truck/Trailer, Vactor/Supersucker Trucks - 8
Excavators - 2
Dump Trucks - 4
Roll Off Trucks w/Boxes - 3
20,000-gal Portable Tanks - 6
Bales Oil Sorbent Pads - 65
Bales 5-inch Oil Sorbent Boom - 55
Bales 100-foot Oil Sorbent Sweep - 58
Bales 8-inch Oil Sorbent Boom - 8

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

Day 2

06:00

Booming operations of GRPs further downriver and recovery operations continue. On-water recovery operations prepare to utilize additional equipment mobilized to the spill by CRC in necessary. Trajectory analyses at +48 hours indicate the leading edge of the spill is not expected to extend past Point Kelly. Shoreline impacts are still expected to be greatest on the spit and at Point Kelly just downriver from confluence of the Columbia and Walla Walla Rivers.

Full-scale recovery operations continue on shore to recover free product and remove diesel-affected soil.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

07:00

At the end of the previous 24 hours the following diesel quantity distribution applies:

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

[redacted]

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

To stay ahead of where the leading edge may possibly move over the next 24 hours, CRC activates 14,000 feet of additional boom mobilized from Portland, Vancouver, and Wauna and seven work boats mobilized from Portland, St. Helens, Longview, and Astoria to deploy boom from where booming activity concluded at the end of Day 1 to the McNary Dam (i.e., GRPs M-318.25, 316.9, 316.75, 318, 313.8, 314.3, 311.0, 304.6, 300.28, 300.2, 300.05, 299.8, 299.4, 299.05, 298.7, 298.45, 298.3, 297.6, and 291.6). These GRPs the mouth of the Walla Walla River, adjacent wetlands at Juniper Canyon and Hat Rock State Park, and the Fish Ladder at McNary Dam. The Fish Ladder is double boomed and lined with absorbent pads and sweeps. The City of Hermiston's pumping station, located approximately 2,000 feet upriver from the dam, is also boomed. Resources used to deploy these GRPs are staged the Hood Park, Port Kelly, Hat Rock State Park, and McNary Dam boat ramp.

CRC mobilized two OSRVs from Portland, the MV MFSA 1 and the MV HW Zarling, with a combined recovery rate of 7,440 bpd, and six shallow water recovery barges from Portland (3), Vancouver, Longview, Clatskanie, and Astoria, with a combined recovery rate of 12,365 bpd. The OSRVs and shallow water recovery barges are deployed at the mouth of the creek, the spit, and at Point Kelly where patches of diesel along the leading edge of the spill are expected.

Additionally, three additional NRCES disc/weir skimmers mobilized from Tacoma, Seattle, Anacortes, and Port Angeles to further augment skimming capabilities. The addition of the OSRVs, shallow water recovery barges, and skimmers increases the rate of recovery to in excess of 42,000 bpd. While not necessarily needed given the volume spilled and the recovery achieved on Day 1, these resources are staged at the downriver staging areas for use if needed.

NRCES continues full-scale shoreside recovery operations to recover free product and diesel-affected soil at the spill site and along the canal, and deploy resources for shoreside cleanup at the McNary National Wildlife Refuge and Point Kelly.

A press release is issued by Tidewater's PIO describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

10:00

A press release is issued by Tidewater's Public Information Officer (PIO) describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

11:00

Oiled birds are encountered and arrangements are made with International Bird Rescue and CRC to set up and establish a bird cleaning and rehabilitation center at Sacajawea Park. These activities are monitored by the Washington Department of Fish and Wildlife (DFW).

14:00

A press conference is conducted with Tidewater, Ecology, and the USCG in attendance. A press release is issued by the IC.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

17:00

On-water recovery actions are concluded due to darkness. Portable skimming and boom maintenance is conducted to the extent practicable throughout the night as are recovery actions at the spill site and drainage canal/creek. Total on-site equipment is as follows:

Storage = 25,763 bbl
EDRC = 32,384 bpd
Boom = 31,800 feet
Gear Trucks - 8
Emergency Response Trailers - 2
Liquid Vacuum, Air Mover, Vacuum Truck/Trailer, Vactor/Supersucker Trucks - 8
Excavators - 2
Dump Trucks - 4
Roll Off Trucks w/Boxes - 3
20,000-gal Portable Tanks - 6
Bales Oil Sorbent Pads - 65
Bales 5-inch Oil Sorbent Boom - 55
Bales 100-foot Oil Sorbent Sweep - 58
Bales 8-inch Oil Sorbent Boom - 8

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues.

Day 3

06:00

Aerial and on-water observations indicate an absence of significant diesel on water. Trajectory analyses at +72 hours predict the downriver extent of the spill to be at or just beyond Point Kelly.

07:00

Planned response activities regarding the evacuation of shoreline areas, shoreline protection operations, additional protection actions and the initiation of shoreline cleanup operations at downriver locations are discussed in meetings between the IC and members of the Command and General Staff. The meetings include the Federal and State On-Scene Coordinators (FOSC and SOSC).

On-water and shoreside recovery operations continue to the extent needed to address sheens and small pockets of diesel that may continue to move downriver. Shoreside cleanup continues from the spill site down to the river.

A press release is issued by Tidewater's PIO describing the spill and follow-up actions taken to protect sensitive environments and recover as much product from on top of the water as possible, while allowing for the spill to naturally dissipate.

08:00

Oiled bird rehabilitation efforts continue at the bird cleaning and rehabilitation center at Sacajawea Park, under the oversight of DFW.

14:00

A press conference is conducted with Tidewater, Ecology, DEQ, EPA, and the USCG in attendance. A press release is issued by the IC.

18:00

Members of Tidewater's response team complete daily documentation of the incident and submit the documents to the IC. Planning for the next operational period continues. Shoreline cleanup plans are being developed.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED
Day 4 and After On-water recovery operations are discontinued in the absence of significant oil on the water. Sorbent sweeps will be used to address remaining sheen where present. Aerial surveillance indicates that sheen has generally dissipated with only minor sheens being present in water adjacent to impacted shoreline where work will continue throughout the days ahead. Most recovery equipment is demobilized. Much of the boom and response crews are demobilized. Cleanup of impacted shorelines is conducted by flushing diesel into boomed areas where it is recovered with portable skimmers or sorbents, or allowed to naturally dissipate. Upon completion of operations, demobilization is authorized by the USCG, EPA, Ecology, DEQ, and trustee agencies. Impacted areas are periodically monitored to evaluate the long term effectiveness of the cleanup actions.

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Worst Case Pipeline Segment Discharge Equipment Summary
Organization | Asset | WRRL # | Homebase | Boom (ft) | EDRC (bpd) | Storage (bbl)
Day 1
TBL | Cont. Sys | 28902 | Umatilla | 1200 | 0 | 0
TBL | Cont. Sys | 28904 | Pasco | 1200 | 0 | 0
TBL | Trailer F, Aftech | 28903 | Pasco | 600 | 0 | 0
TBL | Trailer E1, Aftech | 28905 | Little Goose Dam | 600 | 0 | 0
TBL | Aftech | 28901 | Umatilla | 600 | 0 | 0
TBL | Trailer B1, Aftech | 28900 | Boardman | 600 | 0 | 0
TBL | Trailer D1, Aftech | 28899 | Hood River | 600 | 0 | 0
TBL | Barge #1 | 30049 | Pasco | 0 | 0 | 25083
TBL | Trailer E1, Trailer | 29027 | Little Goose Dam | 0 | 0 | 0
TBL | Trailer F | 29026 | Pasco | 0 | 0 | 0
TBL | Trailer | 29025 | Umatilla | 0 | 0 | 0
TBL | Trailer B1, Trailer | 29024 | Boardman | 0 | 0 | 0
TBL | Trailer D1, Trailer | 29023 | Hood River | 0 | 0 | 0
TBL | Tri-Cities Voyager, 15' Boom Boat | 28995 | Barge Tri-Cities Voyager | 0 | 0 | 0
TBL | 28' Boat - Lamplighter | 28991 | Pasco | 0 | 0 | 0
TBL | 14 Boat | 28987 | Pasco | 0 | 0 | 0
TBL | 14' Boat | 28986 | Pasco | 0 | 0 | 0
TBL | 14' Boat | 28985 | Umatilla | 0 | 0 | 0
TBL | Trailer E1, 15' Boom Boat | 28983 | Little Goose Dam | 0 | 0 | 0
TBL | Trailer F, 15' Boom Boat | 28982 | Pasco | 0 | 0 | 0
TBL | 15' Boom Boat | 28981 | Umatilla | 0 | 0 | 0
TBL | Trailer B1, 15' Boom Boat | 28980 | Boardman | 0 | 0 | 0
TBL | Trailer D1, 15' Boom Boat | 28979 | Hood River | 0 | 0 | 0
TBL | Trailer B1, Douglas 2" Skim Pak | 28965 | Boardman | 0 | 480 | 0
TBL | Douglas 2" Skim Pak | 28966 | Umatilla | 0 | 480 | 0
TBL | Trailer F, Douglas 2" Skim Pak | 28967 | Pasco | 0 | 480 | 0
TBL | Trailer E1, Douglas 2" Skim Pak | 28968 | Little Goose Dam | 0 | 480 | 0
TBL | Tri-Cities Voyager, Douglas 2" Skim Pak | 28972 | Barge Tri-Cities Voyager | 0 | 480 | 0
TBL | Douglas 2" Skim Pak | 28973 | Pasco | 0 | 480 | 0
TBL | Trailer B1, Port-a-Tank | 28921 | Boardman | 0 | 0 | 29
TBL | Trailer F, Port-a-Tank | 28922 | Pasco | 0 | 0 | 29
TBL | Trailer E1, Port-a-Tank | 28923 | Little Goose Dam | 0 | 0 | 29
TBL | Port-a-Tank | 28924 | Umatilla | 0 | 0 | 29
TBL | Trailer D1, Port-a-Tank | 28920 | Hood River | 0 | 0 | 29
CRC | 20" Boom | 30051 | Boardman | 2000 | 0 | 0
CRC | API Drum Skimmer | 29087 | Longview | 0 | 2400 | 0
CRC | API Drum Skimmer | 29088 | Clatskanie | 0 | 2400 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 544-56) | 29121 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 545-56) | 29122 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 546-56) | 29123 | Portland | 0 | 891 | 0
CRC | 36" Coated Drum Skimmer (Unit ID 547-56) | 29124 | Longview | 0 | 891 | 0
CRC | Desmi Terminator 250 | 29089 | Portland | 0 | 3017 | 0
CRC | Desmi Terminator 250 | 29090 | Portland | 0 | 3017 | 0
TBL | Trailer G1 | 29019 | Rainier | 0 | 0 | 0
TBL | Trailer J | 29020 | Vancouver | 0 | 0 | 0
TBL | Trailer I | 29021 | Vancouver | 0 | 0 | 0
TBL | Aftech | 28897 | Vancouver | 1200 | 0 | 0
TBL | Trailer G1, Aftech | 28895 | Rainier | 600 | 0 | 0
TBL | Trailer J, Aftech | 28896 | Vancouver | 600 | 0 | 0
TBL | Trailer I, Aftech | 28898 | Vancouver | 600 | 0 | 0
TBL | Trailer C1, Aftech | 28906 | Clarkston | 600 | 0 | 0
TBL | Trailer H | 30966 | Troutdale | 600 | 0 | 0

C.5.1 Worst Case Discharge (WCD) Scenario Discussion, Continued

WORST CASE DISCHARGE SCENARIO AND RESPONSE RESOURCES, CONTINUED

Worst Case Pipeline Segment Discharge Equipment Summary, Continued
Organization | Asset | WRRL # | Homebase | Boom (ft) | EDRC (bpd) | Storage (bbl)
Day 1, Continued
CRC | 20" Boom | 29129 | Longview | 4200 | 0 | 0
TBL | Trailer G1, Port-a-Tank | 28916 | Rainier | 0 | 0 | 29
TBL | Trailer J, Port-a-Tank | 28917 | Vancouver | 0 | 0 | 29
TBL | Trailer I, Port-a-Tank | 28918 | Vancouver | 0 | 0 | 29
TBL | Trailer H, Port-a-Tank | 28919 | Troutdale | 0 | 0 | 29
TBL | Trailer C1, Port-a-Tank | 28925 | Clarkston | 0 | 0 | 29
TBL | Pillow Tank | 28926 | Vancouver | 0 | 0 | 71
TBL | Pillow Tank | 28927 | Vancouver | 0 | 0 | 71
TBL | Trailer H | 29022 | Troutdale | 0 | 0 | 0
NRCES | Emergency Response Truck | | Pasco | | |
NRCES | 2 - Gear Truck | | Pasco | | |
NRCES | 1 - Emergency Response Trailer | | Pasco | | |
NRCES | 1 - 70-bbl Liquid Vacuum Truck | | Pasco | | |
NRCES | 1 - Air Mover Truck | | Pasco | | |
NRCES | 1 - PID/CO/LEL/H2S/O2 Meter | | Pasco | | |
NRCES | Sorbents, Pads, and Sweep | | Pasco | | |
NRCES | 2 - Gear Truck | | Spokane | | |
NRCES | 1 - PID/CO/LEL/H2S/O2 Meter | | Spokane | | |
NRCES | 15 - Bales 5Ã¢â‚¬Â¬ Oil Sorbent Pads | | Spokane | | |
NRCES | 5 - Bales 5Ã¢â‚¬Â¬ Oil Sorbent Boom | | | | |
NRCES | 8 - Bales 100' Oil Sorbent Sweep | | Spokane | | |
NRCES | 5 - Bales 8Ã¢â‚¬Â¬ Oil Sorbent Boom | | Spokane | | |
NRCES | 2 - Excavators | | Seattle | | |
NRCES | 2 - 120-bbl Vacuum Trailer/Tractor | | Seattle | | |
NRCES | 4 - Dump Truck | | Seattle | | |
NRCES | 4 - Gear Truck | | Seattle | | |
NRCES | 3 - Roll Off Truck with 20-yd Box | | Seattle | | |
NRCES | 4 - Vactor/Supersucker Truck | | Seattle | | |
NRCES | 50 - Bales Oil Sorbent Pads | | Seattle | | |
NRCES | 50 - Bales 5Ã¢â‚¬Â¬ Oil Sorbent Boom | | Seattle | | |
NRCES | 50 - Bales 100' Oil Sorbent Sweep | | Seattle | | |
NRCES | 6 - 20,000-gal Portable Tanks | | Seattle | | |
Day 2
CRC | 20" Boom | 29181 | Portland | 4000 | 0 | 0
CRC | 20" Boom | 29127 | Vancouver | 5000 | 0 | 0
CRC | 20" Boom | 29130 | Wauna | 5000 | 0 | 0
CRC | FRV Columbia Responder | 29029 | Astoria | 0 | 0 | 0
CRC | FRV Independence | 29030 | Longview | 0 | 0 | 0
CRC | FRV Protector | 29031 | St. Helens | 0 | 0 | 0
CRC | 21' Workboat | 29038 | Portland | 0 | 0 | 0
CRC | 20' Workboat | 29039 | Portland | 0 | 0 | 0
CRC | Elizabeth Furse | 29040 | Portland | 0 | 0 | 0
CRC | 20' Workboat | 29157 | Portland | 0 | 0 | 0
CRC | Shallow Water Recovery Barge | 29050 | Vancouver | 0 | 2473 | 100
CRC | Shallow Water Recovery Barge | 29054 | Portland | 400 | 2473 | 100
NRCES | Disc Skimmer/ Power Pack | 28223 | Port Angeles | 0 | 686 | 0
NRCES | Storage Shed, Disc Skimmer/ Power Pack | 28224 | Tacoma, TFW | 0 | 686 | 0
NRCES | Container, Disc Skimmer/ Power Pack | 28225 | Anacortes | 0 | 686 | 0
NRCES | Warehouse, Brush/Weir Skimmer | 28226 | Seattle, South Park | 0 | 662 | 0
CRC | Wildlife Transport Trailer | 29163 | Portland | 0 | 0 | 0
CRC | Wildlife Rehabilitation Trailer | 29170 | Portland | 0 | 0 | 0
CRC | Wildlife Rehabilitation Shelter | 29046 | Portland | 0 | 0 | 0
CRC | OSRV HW Zanling | 29032 | Portland | 0 | 3720 | 24
CRC | OSRV MFSA 1 | 29034 | Portland | 0 | 3720 | 24

C.5.2 Description of Factors Affecting Response Efforts

There are many factors which may affect the ability to respond to an incident. The factors are described in the following table:

FACTORS	CONSIDERATIONS AFFECTING RESPONSE EFFORTS
Size of spill	• Location of spill (e.g. sensitive area vs. no sensitive area) • Spread and spill movement
Proximity to down gradient water intakes	• Facilities are not located near water intakes or wellhead protection areas. • Refer to FIGURE 1-3, SECTION 6, and APPENDIX D.
Proximity to fish and wildlife and sensitive environments	• A release could impact fish, wildlife and sensitive environments as described in SECTION 6.
Likelihood that discharge will travel off-site	• A small spill would be unlikely to travel offsite. • A medium spill has the potential to travel offsite via adjacent waterways. • A worst case discharge has the greatest potential to travel offsite if secondary containment is breached.
Location of material spilled	• See facility information and drainage located in SECTION 1 and FIGURE C-2.

Material discharged	• Materials handled by the Terminal that may be released / discharged include:
	  • Diesel
	  • Ethanol
	  • Gasoline
	• Products are considered non-persistent; gasoline and ethanol are volatile.
	• Refer to APPENDIX D.8.

Weather or aquatic conditions	• Visibility, wind speed, wind direction, and amount of light • Currents, wave height, and salinity
Available remediation equipment	• Resources are available through oil spill contractors in quantities sufficient to meet applicable planning standards.
Probability of a chain reaction or failures	• Potential for a chain reaction or failure is remotely possible but not anticipated. • Secondary containment, response contractors, and trained personnel minimize the potential of such events.
Direction of spill pathway	• Wind direction and speed combined with currents, will determine spill trajectory for over-water facilities; onshore spill trajectory will be determined by local topography.

C.6 PLANNING VOLUME CALCULATIONS

Once the worst case discharge volume has been calculated, response resources must be identified to meet the requirements of 40 CFR 112.20(h). Calculations to determine sufficient amount of response equipment necessary to respond to a worst case discharge is described below. A demonstration of the planning volume calculations is provided below.

C.7 SPILL VOLUME CALCULATIONS

C.7.1 DOT / PHMSA Portion of Pipeline/Facilities

The worst case discharge (WCD) for the DOT portion of the pipeline and facilities, as defined in 49 CFR 194.105(b), as the largest volume of the following:

1. The pipeline's maximum shut-down response time in hours (based on historic discharge data or in the absence of such data, the operators best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or
2. The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or

3. If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.

Under PHMSA's current policy, operators are allowed to reduce the worst case discharge volume derived from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the worst case discharge volume based on breakout tanks in the response zones as follows:

SPILL PREVENTION MEASURES	PERCENT REDUCTION ALLOWED
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30	50%
Tank built, rebuilt, and repaired according to API Std 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to NFPA/API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%*
Maximum allowable credit or reduction	75%

***Note:** The facilities do not have tertiary containment.

The worst case discharge for each response zone was based on the largest volume of the three criteria given above.

The Company has determined the worst case discharge volume to be a catastrophic line failure of the largest line section with the greatest drainage capacity in each response zone or 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 to calculate the pipeline worst case discharge. Although the entire discharge volume of each line was used for the worst case discharge, in an actual spill event, it would take days to drain the line completely. The line would be sealed early in the response effort.

All of the breakout tanks in the pipeline system are within adequate secondary containment, therefore, the discharge volumes for the largest tank was determined by adjusting the total tank volume downward by 50% per the company guidelines.

Considering the volume of release from a line break compared to that of historic discharge in each zone and to the volumes released from a tank failure, the tank failure was found to represent the worst case scenario.

The maximum historic discharge is not applicable for WCD covered by this plan. Given below are the tank and pipeline WCD calculations for this plan.

LOCATION	VOLUME (BBLS)
(b) (7)(F), (b) (3)	

The worst case tank volume is calculated as follows:

Largest tank x Credit for containment tank standards = Tank standards credit

The Company has implemented all of the spill prevention measures, listed on the previous page, except tertiary containment. Therefore, the percent reduction allowed for credit equals 50% and the worst case discharge volume is 50% of the total volume.

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

The worst case discharge for the pipeline segment is calculated at the Pasco-BN Rail Diesel Line .

WCD = [(DT + ST) x MF] + DD

Where:

WCD = worst case discharge (bbl)

DT + ST = maximum detection time + maximum shut down time in adverse weather (generally five minutes except where noted)

MF = maximum flow rate (bph) (using 420 bph)

DD = drain down volume (bbl) (internal diameter)

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

The DOT/PHMSA WCD volume for this plan is: (b) (7)(F), (b) (3)

C.7.2 ODEQ and WDOE Portion of the Facility

OAR 340-141-0005(50) and WAC 173-182-030(54) define Worst Case Discharge (WCD) as the entire volume of product with the highest hazard ranking of toxicity and persistence, from the largest above ground storage tank on the facility site complicated by adverse weather conditions (during which wind, reduced visibility, and sea state hinder but do not preclude normal response operations).

OAR 340-141-0005(1) defines average most probable spill (AMP) as the probable volume of oil that may spill as defined in a plan considering the history of the spill from similar facilities or vessels of the same class operating on the west coast of the United States. For purposes of this plan, the AMP is 10% of the WCD.

The WCD volume is contained in **FIGURE C.7-1.**

FIGURE C.7-1 - ODEQ / WDOE WORST CASE DISCHARGE (WCD) CALCULATIONS (IN BBLS)

ODEQ / WDOE
(b) (7)(F), (b) (3)

Planning volume data is included on the following page:

FIGURE C.7-2 - WDOE PLANNING VOLUME DATA

Click to view/print WDOE Planning Volume Data

Plan Holder: Tidewater Barge Lines

Planning Standard Summary Analysis: WAC 173-182-430 TriCities Planning Standard

The summary analysis spreadsheet is based on a conceptual model 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 times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **5/24/13.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): CRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): (b) (7)(F), (b) (3))

Oil Products Handled by Group (Group 1-5): low-sulfur diesel, high-sulfur diesel, diesel, unleaded gasoline, premium gasoline, bunker fuel, Jet A

Mutual Aid/Letters Of Intent: N/A for this location

Analysis point description: Tri-cities planning standard

Marine 50% or Freshwater 65% shore side storage credit: No

Alternative Planning Standard: N/A for this location

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	25,083	87	25,170	2,282	0	0	2,282	0	5,400	0	5,400	22
2 hr required			0				0				1,000	
meets standard			**Yes**				**Yes**				**Yes**	
3 hr available	25,083	116	25,199	2,762	0	0	2,762	0	6,000	0	6,000	26
3 hr required			0				0				3,000	
meets standard			**Yes**				**Yes**				**Yes**	
6 hr available	25,083	261	25,344	7,562	362	0	7,924	0	11,000	0	11,000	58
6 hr required			1,967	197			1,967			4,800	11,000	
meets standard			**Yes**	**Yes**			**Yes**			**Yes**	**Yes**	
12 hr available	26,527	530	27,057	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	179
12 hr required			9,834	1638.95			6,556			9,800	31,000	
meets standard			**Yes**	**Yes**			**Yes**			**Yes**	**Yes**	
24 hr available	41,296	530	41,826	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	180
24 hr required			18,356				9,178			19,800	51,000	
meets standard			**Yes**				**Yes**			**Yes**	**Yes**	
48 hr available	41,296	530	41,826	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	180
48 hr required			18,356				16,390				51,000	
meets standard			**Yes**				**Yes**				**Yes**	

Plan Holder:Tidewater Terminal Company-Pasco Pipeline

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines and pipeline tank farms

The summary analysis spreadsheet is based on a conceptual model 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 times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **5/24/13.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): CRC

Plan Holder owned equipment: Yes, Tidewater response equipment is listed on the WRRL

Worst Case Spill Volume (bbls): (b) (7)(F),

Oil Products Handled by Group (Group 1-5): Low-sulfur diesel, high-sulfur diesel, diesel, unleaded gasoline, premium gasoline, bunker fuel, jet A

Mutual Aid/Letters Of Intent: N/A for pipeline location.

Analysis point description: Equipment can be mobilized to any point along the pipeline.

Marine 50% or Freshwater 65% shore side storage credit: No

Alternative Planning Standard: N/A for the pipeline location.

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	25,083	87	25,170	2,282	0	0	2,282	0	5,400	0	5,400	22
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	25,083	261	25,344	7,562	362	0	7,924	0	11,000	0	11,000	58
6 hr required			4,527				4,527				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	26,527	530	27,057	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	179
12 hr required			13,582				6,791				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	41,296	530	41,826	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	180
24 hr required			27,163				9,054				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	41,296	530	41,826	22,128	58,944	6,034	87,106	0	60,200	6,900	67,100	180
48 hr required			27,163				11,318				27,000	
meets standard			Yes				Yes				Yes	

C.8 PRODUCT CHARACTERISTICS AND HAZARDS

This Facility may store various types of commodities, including, but not limited to:

- Diesel
- Ethanol
- Gasoline

The key chemical and physical characteristics of each of these oils and/or other small quantity products/ chemicals are identified in the MSDS. The MSDS can be obtained by the facility via the Company intranet.

FIGURE C.8-1 describes primary oils handled. **FIGURE C.8-2** includes additional commodity characteristics information. **FIGURE C.8-3** lists the Material Safety Data Sheets (MSDS).

FIGURE C.8-1 - SUMMARY OF COMMODITY CHARACTERISTICS

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	HEALTH HAZARD WARNING STATEMENT
Diesel	Diesel Fuel #1, Diesel Fuel #2	1	2	C	0	Flammable, combustible. Eye, skin irritant. Hazardous if inhaled.
Ethanol	Ethanol	2	3	C	1	May cause skin and eye irritation. May be fatal if swallowed. Repeated over-exposure can damage liver, kidneys and central nervous system.
Gasoline	Gasoline	1	3	C	0	Extremely flammable. Inhalation above recommended exposure limits may cause headaches, drowsiness, nausea, unconsciousness, death. Harmful if swallowed and/or aspirated into the lungs. Prolonged, repeated contact may cause irritation and/or dermatitis.

Health Hazard	4 = Extremely Hazardous 3 = Hazardous 2 = Warning 1 = Slightly Hazardous 0 = No Unusual Hazard	Fire Hazard (Flash Point)	4 = Below 73°F, 22°C 3 = Below 100°F, 37°C 2 = Below 200°F, 93°C 1 = Above 200°F, 93°C 0 = Will not burn
Special Hazard	A = Asphyxiant C = Contains Carcinogen W = Reacts with Water Y = Radiation Hazard COR = Corrosive OX = Oxidizer H_2S = Hydrogen Sulfide P = Contents under Pressure T = Hot Material	Reactivity Hazard	4 = May Detonate at Room Temperature 3 = May Detonate with Heat or Shock 2 = Violent Chemical Change with High Temperature and Pressure 1 = Not Stable If Heated 0 = Stable

FIGURE C.8-2 - COMMODITY CHARACTERISTICS ADDITIONAL INFORMATION

NAME	DENSITY	SPECIFIC GRAVITY	API GRAVITY	OIL GROUP NUMBER	SULFUR CONTENT	VISCOSITY	POUR POINT
Diesel	6.9-7.4	0.81 - 0.88	52.3 - 29.3	2, 3	< 0.0015	1.7 - 40.0 cS @ 100 degrees F	-10A degrees F and -35A degrees F
Ethanol	6.7	0.80	NA	NA	NA		
Gasoline	6.0 - 6.30	0.72 - 0.76	70.6 - 54.7	1	< 0.0080		

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS)

Click to view/print Arco ULSD

ARCO

Material Safety Data Sheet

bp

1. Product and company identification

Product name	ARCO ULSD
MSDS #	APPC174
Code	APPC174
Product use	Fuel.
Synonyms	Ultra Low Sulfur Diesel, CARB Diesel, CARB ULSD, EPA ULSD, BP ULSD, ULS #2 Diesel, and #2 ULSD
Supplier	BP Products North America Inc. 150 West Warrenville Road Naperville, Illinois 60563-8460 USA
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Hazards identification

Physical state	Liquid.
Color	Amber to various colors (May be dyed Red.)
Emergency overview	WARNING ! COMBUSTIBLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED. ASPIRATION HAZARD. HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS. MAY CAUSE RESPIRATORY TRACT IRRITATION. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS. Combustible liquid. Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. If ingested, do not induce vomiting. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	Slightly irritating to the eyes.
Skin	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation. Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. See toxicological information (Section 11).
Ingestion	Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. See toxicological information (Section 11).

See toxicological information (Section 11)

3. Composition/information on ingredients

Ingredient name	CAS #	%
Petroleum distillates	68476-34-6	90 - 100
.		
Contains one or more of the following biodiesels:	Varies	0 - 5
soybean oil, me ester	67784-80-9	.
Fatty acids, sunflower-oil, Me esters	68919-54-0	.
Fatty acids methyl esters	67762-38-3	.
Fatty acids, vegetable-oil, Methyl esters	68990-52-3	.
rape oil, me ester	73891-99-3	.
Fatty acids, canola-oil, Me esters	129828-16-6	.
fatty acids, tallow, me esters	61788-61-2	.
Contains one or more of the following renewable diesel:		
Fuels, diesel, C9-18-alkane branched and linear	1159170-26-9	0 - 5

May also contain small quantities of proprietary performance additives.

4. First aid measures

Eye contact — In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin contact — Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation — If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion — Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-fighting measures

Flammability of the product — Combustible liquid.

Auto-ignition temperature — 257°C (494°F)

Flash point — Closed cup: 51.667 to 82.222°C (125 to 180°F) [Pensky-Martens.]

Explosion limits — Lower: 0.7%
Upper: 5%

Fire/explosion hazards — Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Unusual fire/explosion hazards — Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Extinguishing media

Suitable — In case of fire, use water fog, foam, dry chemicals, or carbon dioxide.

Not suitable — Do not use water jet.

Fire-fighting procedures — Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products — Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

Protective clothing (fire) — Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards — Do not use water jet.

6. Accidental release measures

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Personal protection in case of a large spill

Chemical splash goggles. Chemical-resistant protective suit. Boots. Chemical-resistant gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product. CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

Methods for cleaning up

Large spill

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Do not ingest. Never siphon by mouth. Put on appropriate personal protective equipment (see Section 8). Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Occupational exposure limits
Petroleum distillates	**ACGIH TLV (United States). Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hour(s). Issued/Revised: 1/2002 Form: Total hydrocarbons

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal protection

Eyes

Avoid contact with eyes. Safety glasses with side shields.

Skin and body	Avoid contact with skin and clothing. Wear suitable protective clothing.
Respiratory	Use only with adequate ventilation. Do not breathe vapor or mist. If ventilation is inadequate, use a NIOSH-certified respirator with an organic vapor cartridge and P95 particulate filter. CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.
Hands	Wear gloves that cannot be penetrated by chemicals or oil. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions. Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.

9. Physical and chemical properties

Physical state	Liquid.
Color	Amber to various colors (May be dyed Red.)
Odor	Hydrocarbon.
Flash point	Closed cup: 51.667 to 82.222°C (125 to 180°F) [Pensky-Martens.]
Explosion limits	Lower: 0.7% Upper: 5%
Auto-ignition temperature	257°C (494°F)
Specific gravity	0.82 to 0.85
Viscosity	Kinematic: 1.9 to 4 mm^2/s (1.9 to 4 cSt) at 37.778°C (100°F)
Boiling point / Range	159.44 to 362.22°C (319 to 684°F)
Melting point / Range	-17.778 to -4.4444°C (-0.0004 to 24°F)
Vapor pressure	<0.344 kPa (<2.586 mm Hg) at 37.778°C (100°F)
Solubility	insoluble in water.
Remarks	Vapor pressure derived from: AP-42, Chapter 7.1, Organic Liquid Storage Tanks, Table 7.1-2, U.S.EPA 2006

10. Stability and reactivity

Stability and reactivity	Stable under recommended storage and handling conditions (see section 7).
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Keep away from heat, sparks and flame. Avoid all possible sources of ignition (spark or flame).
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. halogenated compounds
Hazardous decomposition products	carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Classification

Product/ingredient name	IARC	NTP	OSHA
fuel, diesel no. 2	3	-	-

IARC :
3 - Not classifiable as a human carcinogen.

Other Toxicity Data

Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product. Do not siphon by mouth.

Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams.

Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer.

Diesel exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk.

Other Information

Potential chronic health effects

Carcinogenicity — No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

Mobility — Spillages may penetrate the soil causing ground water contamination.

Bioaccumulative potential — This product is not expected to bioaccumulate through food chains in the environment.

Other ecological information — Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13. Disposal considerations

Waste Information — The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
DOT Classification	NA1993	Diesel fuel	3	III	-
TDG Classification	UN1202	Gas oil	3	III	-

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
IMDG Classification	UN1202	Gas oil	3	III	**Emergency schedules (EmS)** F-E, S-E **Remarks** Marine pollutant
IATA/ICAO Classification	UN1202	Gas oil	3	III	**Passenger and Cargo Aircraft**Quantity limitation: 60 L Packaging instructions: 355 **Cargo Aircraft Only**Quantity limitation: 220 L Packaging instructions: 366 **Limited Quantities - Passenger Aircraft**Quantity limitation: 10 L Packaging instructions: Y344 **Remarks** Environmentally hazardous substance mark.

15. Regulatory information

U.S. Federal Regulations

United States inventory (TSCA 8b)

All components are listed or exempted.

TSCA 5(a)2 proposed significant rules: No products were found.

TSCA 5(a)2 final significant rules: No products were found.

TSCA 5(e) substance consent order: No products were found.

TSCA 12(b) one-time export: Naphthalene

TSCA 12(b) annual export notification: No products were found.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ARCO ULSD: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313

Form R - Reporting requirements

This product does not contain any hazardous ingredients at or above regulated thresholds.

Supplier notification

This product does not contain any hazardous ingredients at or above regulated thresholds.

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):

CERCLA: Hazardous substances.: Benzene: 10 lbs. (4.54 kg); o-Xylene: 1000 lbs. (454 kg); Alkylaryl sulfonic acid: 1000 lbs. (454 kg); Toluene: 1000 lbs. (454 kg); xylene: 100 lbs. (45.4 kg); Ethylbenzene: 1000 lbs. (454 kg); Vinyl acetate: 5000 lbs. (2270 kg); Naphthalene: 100 lbs. (45.4 kg); Cumene: 5000 lbs. (2270 kg); Proprietary Glycol ethers;

State regulations

Massachusetts Substances

None of the components are listed.

New Jersey Hazardous Substances

None of the components are listed.

Pennsylvania RTK Hazardous Substances

None of the components are listed.

California Prop. 65	**WARNING:** This product contains a chemical known to the State of California to cause cancer. Naphthalene; Ethylbenzene **WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Toluene **WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Benzene Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including diesel exhaust, a Prop 65 carcinogen, and carbon monoxide, a Prop 65 reproductive toxin.

Other regulations

Canada inventory	At least one component is not listed.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.
Australia Inventory (AICS)	At least one component is not listed.
China Inventory (IECSC)	At least one component is not listed.
Japan Inventory (ENCS)	At least one component is not listed.
Korea inventory (KECI)	At least one component is not listed.
Philippines Inventory (PICCS)	At least one component is not listed.

16. Other information

Label requirements

WARNING !

COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF SWALLOWED.
ASPIRATION HAZARD.
HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS.

HMIS® Rating :

Health	*	**1**
Flammability		**2**
Physical Hazard		**0**
Personal protection		**X**

National Fire Protection Association (U.S.A.)

History

Date of issue 03/01/2012.

Date of previous issue 09/27/2011.

Prepared by Product Stewardship

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for

supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Diesel Fuel No. 2

Material Safety Data Sheet

1. Product and company identification

Product name	DIESEL FUEL NO. 2
MSDS #	11155
Code	11155
Product use	Fuel.
Synonyms	Ultra Low Sulfur No. 2 Amoco Premier Diesel Fuel, Ultra Low Sulfur No. 2 Amoco Premier Diesel Fuel – Winterized, Ultra Low Sulfur No. 2 BP Supreme Diesel, Low Sulfur No. 2 BP Diesel Fuel, Ultra Low Sulfur No. 2 BP Diesel Fuel, Ultra Low Sulfur No. 2 BP Diesel Fuel – Winterized
Supplier	BP Products North America Inc. 150 West Warrenville Road Naperville, Illinois 60563-8460 USA
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Hazards identification

Physical state	Liquid.
Color	Colorless. to Various Colors. (May be dyed Red., Light Green. ,Yellow.)
Emergency overview	WARNING ! COMBUSTIBLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED. ASPIRATION HAZARD. HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS. MAY CAUSE RESPIRATORY TRACT IRRITATION. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS. Combustible liquid. Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. If ingested, do not induce vomiting. Avoid contact with eyes, skin and clothing. Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	Slightly irritating to the eyes.
Skin	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation. Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. See toxicological information (section 11).

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Ingestion	Harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage. See toxicological information (section 11).

See toxicological information (section 11)

3. Composition/information on ingredients

Ingredient name	CAS #	%
Petroleum distillates (Diesel Fuel No. 2)	68476-34-6	95 - 100
Contains one or more of the following biodiesels:	Varies	0 - 5
soybean oil, me ester	67784-80-9	.
Fatty acids, sunflower-oil, Me esters	68919-54-0	.
Fatty acids methyl esters	67762-38-3	.
Fatty acids, vegetable-oil, Methyl esters	68990-52-3	.
rape oil, me ester	73891-99-3	.
Fatty acids, canola-oil, Me esters	129828-16-6	.
fatty acids, tallow, me esters	61788-61-2	.
Contains:		
Naphthalene	91-20-3	1 - 3

May also contain small quantities of proprietary performance additives.

4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-fighting measures

Flammability of the product	Combustible liquid.
Auto-ignition temperature	257°C (494°F)
Flash point	Closed cup: >38°C (>100.4°F) [Pensky-Martens.]
Explosion limits	Lower: 0.6% Upper: 7.5%
Fire/explosion hazards	Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Unusual fire/explosion hazards	Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Extinguishing media	
Suitable	In case of fire, use water fog, foam, dry chemicals, or carbon dioxide.
Not suitable	Do not use water jet.
Fire-fighting procedures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
Protective clothing (fire)	

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards Do not use water jet.

6. Accidental release measures

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Personal protection in case of a large spill Chemical splash goggles. Chemical-resistant protective suit. Boots. Chemical-resistant gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product. CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

Methods for cleaning up

Large spill Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling Do not ingest. Never siphon by mouth. If ingested, do not induce vomiting. Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Storage Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Occupational exposure limits
Petroleum distillates	**ACGIH TLV (United States). Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hour(s). Issued/Revised: 1/2002 Form: Total hydrocarbons
Naphthalene	**ACGIH TLV (United States).** STEL: 79 mg/m³ 15 minute(s). Issued/Revised: 5/1996 STEL: 15 ppm 15 minute(s). Issued/Revised: 5/1996 TWA: 52 mg/m³ 8 hour(s). Issued/Revised: 5/1996 TWA: 10 ppm 8 hour(s). Issued/Revised: 5/1996 **OSHA PEL (United States).** TWA: 50 mg/m³ 8 hour(s). Issued/Revised: 6/1993

TWA: 10 ppm 8 hour(s). Issued/Revised: 6/1993

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal protection

Eyes

Avoid contact with eyes. Safety glasses with side shields.

Skin and body

Avoid contact with skin and clothing. Wear suitable protective clothing.

Respiratory

Use only with adequate ventilation. Do not breathe vapor or mist. If ventilation is inadequate, use a NIOSH-certified respirator with an organic vapor cartridge and P95 particulate filter.

CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

Hands

Wear gloves that cannot be penetrated by chemicals or oil.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.

9. Physical and chemical properties

Physical state	Liquid.
Color	Colorless. to Various Colors. (May be dyed Red., Light Green. ,Yellow.)
Odor	Petroleum
Flash point	Closed cup: >38°C (>100.4°F) [Pensky-Martens.]
Explosion limits	Lower: 0.6% Upper: 7.5%
Auto-ignition temperature	257°C (494°F)
Specific gravity	<1 [Water = 1]
Density	820 to 875 kg/m^3 (0.82 to 0.875 g/cm^3)
Viscosity	Kinematic: 1.7 to 4.1 mm^2/s (1.7 to 4.1 cSt) at 40°C
Solubility	negligible <0.1%

10. Stability and reactivity

Stability and reactivity	Stable under recommended storage and handling conditions (see section 7).
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Keep away from heat, sparks and flame. Avoid all possible sources of ignition (spark or flame).
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. halogenated compounds.

Hazardous decomposition products	carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Classification

Product/ingredient name	IARC	NTP	OSHA
Naphthalene	2B	Possible	-
fuel, diesel no. 2	3	-	-

IARC :
2B - Possible carcinogen to human.
3 - Not classifiable as a human carcinogen.

NTP :
Possible - Reasonably anticipated to be human carcinogens.

Other Toxicity Data

Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product. Do not siphon by mouth.

Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams.

Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer.

Diesel exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk.

Naphthalene has been reported to cause developmental toxicity in mice after oral exposure to relatively high dose levels, but developmental toxicity was not observed in NTP (National Toxicology Program) sponsored studies in rats and rabbits. Ingestion or inhalation of naphthalene can result in hemolysis and other blood abnormalities, and individuals (and infants) deficient in glucose-6-phosphate dehydrogenase may be especially susceptible to these effects. Inhalation of naphthalene may cause headache and nausea. Airborne exposure can result in eye irritation. Naphthalene exposure has been associated with cataracts in animals and humans.

Other information

Potential chronic health effects

Carcinogenicity	Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

Mobility	Spillages may penetrate the soil causing ground water contamination.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.

Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13. Disposal considerations

Waste information

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
DOT Classification	NA 1993	Diesel fuel	3	III	-
TDG Classification	UN 1202	Gas oil	3	III	-
IMDG Classification	UN 1202	Gas oil	3	III	**Remarks** Marine pollutant
IATA/ICAO Classification	UN 1202	Gas oil	3	III	**Remarks** Environmentally hazardous substance mark.

15. Regulatory information

U.S. Federal Regulations

United States Inventory (TSCA 8b)

All components are listed or exempted.

TSCA 12(b) one-time export: Naphthalene

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Naphthalene
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: DIESEL FUEL NO. 2: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Naphthalene	91-20-3	1.0035 - 3.0111
Supplier notification	Naphthalene	91-20-3	1.0035 - 3.0111

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): CERCLA: Hazardous substances.: o-Xylene: 1000 lbs. (454 kg); Naphthalene: 100 lbs. (45.4 kg); benzo[def]chrysene: 1 lb. (0.454 kg); Ethylbenzene: 1000 lbs. (454 kg); xylene: 100 lbs. (45.4 kg); Cumene: 5000 lbs. (2270 kg); Phenol: 1000 lbs. (454 kg); Benzene: 10 lbs. (4.54 kg); Alkylaryl sulfonic acid: 1000 lbs. (454 kg); Toluene: 1000 lbs. (454 kg); Methanol: 5000 lbs. (2270 kg); 2-Butoxyethanol;

State regulations

Massachusetts Substances	The following components are listed: NAPHTHALENE
New Jersey Hazardous Substances	The following components are listed: DIESEL FUEL; # 2 HEATING OIL; NAPHTHALENE; MOTH FLAKES
Pennsylvania RTK Hazardous Substances	The following components are listed: NAPHTHALENE
California Prop. 65	**WARNING:** This product contains a chemical known to the State of California to cause cancer. Naphthalene; Ethylbenzene; benzo[def]chrysene **WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Toluene **WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Benzene Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including diesel exhaust, a Prop 65 carcinogen, and carbon monoxide, a Prop 65 reproductive toxin.

Inventories

Canada Inventory	Not determined.
Europe Inventory	At least one component is not listed.
Australia Inventory (AICS)	At least one component is not listed.
China Inventory (IECSC)	Not determined.
Japan Inventory (ENCS)	At least one component is not listed.
Korea Inventory (KECI)	At least one component is not listed.
Philippines Inventory (PICCS)	At least one component is not listed.

16. Other information

Label requirements

WARNING !

COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF SWALLOWED.
ASPIRATION HAZARD.
HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS.

HMIS® Rating :

Health	* 1
Flammability	2
Physical Hazard	0
Personal protection	X

National Fire Protection Association (U.S.A.)

History

Date of issue 07/20/2010.

Date of previous issue 07/20/2010.

Prepared by Product Stewardship

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Sweet Distillate

MSDS Data

SWEET DISTILLATE RS00203

Cherry Point Information

Cherry Point Hazard Rating:

Health		Reactivity
3	2	0

4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-No Significant Hazard

Cherry Point Hazard Warning:

Carcinogen (H)
Reproductive (F,D)
CNS Depressant
Skin Absorber
Irritant
Kidney Toxin
Liver Toxin
Combustible

Nickname(s):

2nd Frac Circ Reflux
Crude Stove Oil
DHDS Stove Oil
FCC Jet
HC Jet
High Flash Jet
Hydrocracker High Flash Jet
Jet Fuel
Jet Fuel, JFA
Stabilizer Pumparound
Stove Oil
Straight Run Stove Oil

CHERRY POINT PERSONAL PROTECTIVE EQUIPMENT

MACHINIST - FIELD WORK:
WHEN OPENING PUMP CASING IN THE FIELD, USE NEOPRENE OR NITRILE GLOVES.

MACHINIST - SHOP WORK:
FOR DISASSEMBLY WORK IN THE SHOP, USE DISPOSABLE NITRILE GLOVES IF LIQUID CONTAMINATION IS PRESENT ON PUMP PARTS.

DOT INFORMATION:

SHIPPING NAME : PROPER CLASSIFICATION TO BE DETERMINED AT THE TIME OF SHIPMENT

*** End of Cherry Point Information ***

GENERAL INFORMATION (PROD & CO ID) DATE: 0804 CP

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: SWEET DISTILLATE
MSDS #: RS203
CODE: RS203
PRODUCT USE: INTERMEDIATE.

SYNONYMS: HYDROCRACKED JET FUEL, JFA, DHDS STOVE OIL, 2ND FRAC CIRC REFLUX, JET FUEL

SUPPLIER
BP PRODUCTS NORTH AMERICA INC.
150 WEST WARRENVILLE ROAD
NAPERVILLE, ILLINOIS 60563-8460
USA
EMERGENCY HEALTH INFORMATION: 1 (800) 447-8735
OUTSIDE THE US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION: 1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION: 1 (866) 4 BP - MSDS
(866-427-6737 TOLL FREE - NORTH AMERICA)
EMAIL: BPCARES@BP.COM

HEALTH & FIRST AID (HAZARDS IDENTIFICATION)

PHYSICAL STATE: LIQUID.
COLOR: COLORLESS. TO LIGHT AMBER.

EMERGENCY OVERVIEW
WARNING !
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
ASPIRATION HAZARD.
HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS.
HARMFUL IF SWALLOWED.
INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS.
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

FLAMMABLE LIQUID. HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. KEEP AWAY FROM HEAT, SPARKS AND FLAME. AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. DO NOT BREATHE VAPOR OR MIST. DO NOT INGEST. IF INGESTED, DO NOT INDUCE VOMITING. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA. RISK OF CANCER DEPENDS ON DURATION AND LEVEL OF EXPOSURE. USE ONLY WITH ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. WASH THOROUGHLY AFTER HANDLING.

ROUTES OF ENTRY: DERMAL CONTACT. EYE CONTACT. INHALATION. INGESTION.

POTENTIAL HEALTH EFFECTS
EYES: MAY CAUSE EYE IRRITATION.

SKIN: MAY CAUSE SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL ON PROLONGED EXPOSURE. SEE TOXICOLOGICAL INFORMATION (SECTION).

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. INHALATION CAUSES HEADACHES, DIZZINESS,
DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. SEE TOXICOLOGICAL INFORMATION (SECTION).

INGESTION: HARMFUL IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CAUSES GASTROINTESTINAL IRRITATION AND DIARRHEA. IRRITATING TO MOUTH, THROAT AND STOMACH.

SEE TOXICOLOGICAL INFORMATION (SECTION)

HEALTH & FIRST AID (FIRST AID MEASURES)

EYE CONTACT:
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

SKIN CONTACT:
IMMEDIATELY WASH EXPOSED SKIN WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE. IN THE EVENT OF ANY COMPLAINTS OR SYMPTOMS, AVOID FURTHER EXPOSURE. GET MEDICAL ATTENTION.

INHALATION:
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:
ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

TOXICOLOGICAL INFORMATION

CLASSIFICATION

PRODUCT/INGREDIENT NAME	IARC	NTP	OSHA
NAPHTHALENE	2B	POSSIBLE	-

IARC :
2B - POSSIBLE CARCINOGEN TO HUMAN.
NTP :
POSSIBLE - REASONABLY ANTICIPATED TO BE HUMAN CARCINOGENS.

OTHER TOXICITY DATA
ASPIRATION OF THIS MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONIA AND CAN BE FATAL. ASPIRATION INTO THE LUNGS CAN OCCUR WHILE VOMITING AFTER INGESTION OF THIS MATERIAL.

NAPHTHALENE HAS BEEN REPORTED TO CAUSE DEVELOPMENTAL TOXICITY IN MICE AFTER ORAL EXPOSURE TO RELATIVELY HIGH DOSE LEVELS, BUT DEVELOPMENTAL TOXICITY WAS NOT OBSERVED IN NTP (NATIONAL TOXICOLOGY PROGRAM) SPONSORED STUDIES IN RATS AND RABBITS. INGESTION OR INHALATION OF NAPHTHALENE CAN RESULT IN HEMOLYSIS AND OTHER BLOOD ABNORMALITIES, AND INDIVIDUALS (AND INFANTS) DEFICIENT IN GLUCOSE-6-PHOSPHATE DEHYDROGENASE MAY BE ESPECIALLY SUSCEPTIBLE TO THESE EFFECTS. INHALATION OF NAPHTHALENE MAY CAUSE HEADACHE AND NAUSEA. AIRBORNE EXPOSURE CAN RESULT IN EYE IRRITATION.

NAPHTHALENE EXPOSURE HAS BEEN ASSOCIATED WITH CATARACTS IN ANIMALS AND HUMANS. THIS PRODUCT CONTAINS TRIMETHYLBENZENES. THESE COMPOUNDS CAUSE IRRITATION TO THE EYES, NOSE AND RESPIRATORY TRACT. REPEATED DERMAL EXPOSURE CAN DEFAT AND IRRITATE THE SKIN. INHALATION MAY CAUSE DIZZINESS AND DROWSINESS. STUDIES IN LABORATORY ANIMALS WITH MIXTURES OF C9 AROMATIC HYDROCARBONS PRODUCED ADVERSE EFFECTS ON DEVELOPMENT SUCH AS INCREASED FETAL MORTALITY, REDUCED FETAL WEIGHT, AND DELAYED OSSIFICATION AT HIGH EXPOSURE CONCENTRATIONS. EFFECTS WERE REDUCED IF EXPOSURE WAS TERMINATED PRIOR TO DELIVERY. THERE WAS NO EVIDENCE OF REPRODUCTIVE TOXICITY.

XYLENES: XYLENE HAS BEEN REPORTED TO CAUSE CENTRAL NERVOUS SYSTEM EFFECTS AT CONCENTRATIONS ABOVE THE RECOMMENDED EXPOSURE LIMIT. XYLENE VAPOR BECOMES IRRITATING AT RELATIVELY HIGH LEVELS. IN ONE STUDY, EYE IRRITATION WAS REPORTED AT EXPOSURES OF 460 PPM AND IN ONE PERSON AT 230 PPM AFTER 15 MINUTES. IN ANOTHER STUDY, NO ONE REPORTED EYES, NOSE AND THROAT IRRITATION AT MIXED XYLENE EXPOSURES UP TO 230 PPM FOR 30 MINUTES. DERMAL LD50 IS EXPECTED TO BE GREATER THAN 10G/KG IN RABBITS, BASED ON TEST RESULTS FROM SIMILAR MATERIALS.

MIXED XYLENES CAUSED SLIGHT HEARING LOSS IN RATS EXPOSED TO 800 PPM IN THE AIR FOR 14 HOURS/DAY FOR SIX WEEKS. THERE IS NO INFORMATION AVAILABLE FOR LOWER CONCENTRATIONS; HOWEVER, SIMILAR CHEMICALS THAT HAVE CAUSED THESE HEARING EFFECTS AT SIMILAR CONCENTRATIONS HAVE NOT CAUSED EFFECTS AT LOWER CONCENTRATIONS.

PREGNANT ANIMALS EXPOSED TO XYLENE OR ITS ISOMERS HAVE BEEN REPORTED TO CAUSE DEVELOPMENT TOXICITY IN RODENTS WHEN EXPOSED BY INHALATION. THE DEVELOPMENTAL EFFECTS OBSERVED CONSISTED OF DELAYED DEVELOPMENT AND MINOR SKELETAL VARIATIONS, BUT NO MALFORMATIONS. BECAUSE OF THE HIGH EXPOSURE LEVELS USED IN THESE STUDIES, WE DO NOT BELIEVE THAT THESE RESULTS IMPLY AN INCREASED RISK OF REPRODUCTIVE TOXICITY TO WORKERS EXPOSED TO XYLENE LEVELS AT OR BELOW THE EXPOSURE LIMITS.

XYLENE AND ITS ISOMERS ARE NOT GENOTOXIC.

TECHNICAL GRADE XYLENE HAS BEEN TESTED IN A NATIONAL TOXICOLOGY PROGRAM CARCINOGENICITY STUDY IN RATS AND MICE DOSED ORALLY FOR TWO YEARS. THERE WAS NO EVIDENCE OF CARCINOGENICITY.

FROM SKIN-PAINTING STUDIES OF PETROLEUM DISTILLATES OF SIMILAR COMPOSITION AND DISTILLATE RANGE, IT HAS BEEN SHOWN THAT THESE TYPES OF MATERIALS OFTEN POSSESS WEAK CARCINOGENIC ACTIVITY IN LABORATORY ANIMALS. IN THESE TESTS, THE MATERIAL IS PAINTED ON THE SHAVED BACKS OF MICE TWICE A WEEK FOR THEIR LIFETIME. THE MATERIAL IS NOT WASHED OFF BETWEEN APPLICATIONS. THEREFORE, THERE MAY BE A POTENTIAL RISK OF SKIN CANCER FROM PROLONGED OR REPEATED SKIN CONTACT WITH THIS PRODUCT IN THE ABSENCE OF GOOD PERSONAL HYGIENE. THIS PARTICULAR PRODUCT HAS NOT BEEN TESTED FOR CARCINOGENIC ACTIVITY, BUT WE HAVE CHOSEN TO BE CAUTIOUS IN LIGHT OF THE FINDINGS WITH OTHER DISTILLATE STREAMS.

OCCASIONAL SKIN CONTACT WITH THIS PRODUCT IS NOT EXPECTED TO HAVE SERIOUS EFFECTS, BUT GOOD PERSONAL HYGIENE SHOULD BE PRACTICED AND REPEATED SKIN CONTACT AVOIDED. ANIMAL STUDIES WITH THIS MATERIAL HAVE RESULTED IN MODERATE SKIN IRRITATION FOLLOWING SHORT-TERM EXPOSURE OR PROLONGED/REPEATED EXPOSURE. SKIN IRRITATION AND BODY WEIGHT LOSS WERE OBSERVED IN 28 DAY DERMAL STUDIES ON THIS MATERIAL IN RATS, BUT THERE WERE NO SYSTEMIC TISSUE CHANGES CHARACTERISTIC OF DISEASE. PERSONAL HYGIENE MEASURES TAKEN TO PREVENT SKIN IRRITATION ARE EXPECTED TO BE ADEQUATE TO PREVENT RISK OF SKIN CANCER.

THIS PRODUCT HAS A SUFFICIENTLY LOW VAPOR PRESSURE TO PREVENT A HAZARDOUS BUILDUP OF VAPORS UNLESS THE PRODUCT IS HEATED, USED IN A CONFINED SPACE WITH INADEQUATE VENTILATION OR MISTED. INHALATION OF MIST OR HIGH CONCENTRATIONS OF VAPORS CAN PRODUCE DIZZINESS, HEADACHE, AND NAUSEA AND POSSIBLY IRRITATION OF THE EYE, NOSE AND THROAT. IN ACUTE INHALATION TOXICITY TESTS IN RATS, DURING EXPOSURE THE MATERIAL CAUSED LABORED BREATHING, REDUCED ACTIVITY AND NASAL DISCHARGE.

MATERIALS OF THIS TYPE HAVE BEEN SHOWN TO PRODUCE KIDNEY DAMAGE IN MALE RATS

FOLLOWING PROLONGED INHALATION EXPOSURES. FOLLOWING EXTENSIVE RESEARCH, THIS EFFECT APPEARS TO BE UNIQUE TO THE MALE RAT AND IS CONSIDERED TO BE OF LITTLE OR NO RELEVANCE IN TERMS OF HUMAN HEALTH RISK.

OTHER INFORMATION
POTENTIAL CHRONIC HEALTH EFFECTS
CARCINOGENICITY NO COMPONENT OF THIS PRODUCT AT LEVELS GREATER THAN 0.1% IS IDENTIFIED AS A CARCINOGEN BY ACGIH OR THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC). NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN 0.1% IS IDENTIFIED AS A CARCINOGEN BY THE U.S. NATIONAL TOXICOLOGY PROGRAM (NTP) OR THE U.S. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE
PRE-EXISTING SKIN AND DIGESTIVE DISORDERS MAY BE AGGRAVATED BY OVER-EXPOSURE TO THIS PRODUCT.

COMPOSITION & EXPOSURE LIMITS (COMP/INFO ON INGREDIENTS)

INGREDIENT NAME	CAS #	%
DISTILLATES, PETROLEUM, SWEETENED MIDDLE	64741-86-2	100
CONTAINS:		
NAPHTHALENE	91-20-3	0.5 - 1
TRIMETHYLBENZENE	25551-13-7	0.5 - 2
XYLENE	1330-20-7	0 - 2

FIRE & EXPLOSION HAZARD DATA (FIRE-FIGHTING MEASURES)

FLAMMABILITY OF THE PRODUCT: COMBUSTIBLE LIQUID AND VAPOR.
AUTO-IGNITION TEMPERATURE: 210 C (410 F) (BASED ON NFPA FUEL OIL NO. 1)
FLASH POINT: CLOSED CUP: 48.833 TO 50.539 C (119.9 TO 123 F)
EXPLOSION LIMITS: LOWER: 0.7%
UPPER: 5%
(BASED ON NFPA FUEL OIL NO.1)

FIRE/EXPLOSION HAZARDS:
IN A FIRE OR IF HEATED, A PRESSURE INCREASE WILL OCCUR AND THE CONTAINER MAY BURST, WITH THE RISK OF A SUBSEQUENT EXPLOSION. THE VAPOR/GAS IS HEAVIER THAN AIR AND WILL SPREAD ALONG THE GROUND. VAPORS MAY ACCUMULATE IN LOW OR CONFINED AREAS OR TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. RUNOFF TO SEWER MAY CREATE FIRE OR EXPLOSION HAZARD.

UNUSUAL FIRE/EXPLOSION HAZARDS:
COMBUSTIBLE LIQUID AND VAPOR. EXPLOSIVE IN THE PRESENCE OF THE FOLLOWING MATERIALS OR CONDITIONS: OPEN FLAMES, SPARKS AND STATIC DISCHARGE AND HEAT.

EXTINGUISHING MEDIA
SUITABLE: IN CASE OF FIRE, USE FOAM, DRY CHEMICAL OR CARBON DIOXIDE EXTINGUISHER OR SPRAY.
NOT SUITABLE: DO NOT USE WATER JET.

FIRE-FIGHTING PROCEDURES:
PROMPTLY ISOLATE THE SCENE BY REMOVING ALL PERSONS FROM THE VICINITY OF THE INCIDENT IF THERE IS A FIRE. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. MOVE CONTAINERS FROM FIRE AREA IF THIS CAN BE DONE WITHOUT RISK. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL. DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. WITHDRAW FROM FIRE AND LET IT BURN.

HAZARDOUS COMBUSTION PRODUCTS:
DECOMPOSITION PRODUCTS MAY INCLUDE THE FOLLOWING MATERIALS:
CARBON OXIDES (CO, CO2) (CARBON MONOXIDE, CARBON DIOXIDE)

PROTECTIVE CLOTHING (FIRE):
FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

SPECIAL REMARKS ON FIRE HAZARDS:
OSHA / NFPA CLASS 2 COMBUSTIBLE LIQUID.

FIRE & EXPLOSION HAZARD DATA (STABILITY & REACTIVITY)

STABILITY AND REACTIVITY:
THE PRODUCT IS STABLE. UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

CONDITIONS TO AVOID:
AVOID ALL POSSIBLE SOURCES OF IGNITION (SPARK OR FLAME). KEEP AWAY FROM HEAT, SPARKS AND FLAME.

INCOMPATIBILITY WITH VARIOUS SUBSTANCES:
REACTIVE OR INCOMPATIBLE WITH THE FOLLOWING MATERIALS: OXIDIZING MATERIALS, ACIDS AND ALKALIS. CHLORINE.

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON OXIDES (CO, CO2) (CARBON MONOXIDE, CARBON DIOXIDE)

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

PHYSICAL & CHEMICAL DATA (PHYSICAL & CHEMICAL PROPERTIES)

PHYSICAL STATE:	LIQUID.
COLOR:	COLORLESS. TO LIGHT AMBER.
ODOR:	KEROSENE
FLASH POINT:	CLOSED CUP: 48.833 TO 50.539 C
	(119.9 TO 123 F)
EXPLOSION LIMITS:	LOWER: 0.7%
	UPPER: 5%
	(BASED ON NFPA FUEL OIL NO.1)
AUTO-IGNITION TEMPERATURE:	210 C (410 F)
	(BASED ON NFPA FUEL OIL NO. 1)
SPECIFIC GRAVITY:	0.81 [WATER = 1]
PH:	6 - 8 ESTIMATED.
VISCOSITY:	KINEMATIC: 1.65 TO 1.67 MM2/S
	(1.65 TO 1.67 CST) AT 37.778 C
	(100 F)
BOILING POINT/RANGE:	115.96 TO 302.29 C
	(240.7 TO 576.1 F)
MELTING POINT/RANGE:	-46.267 TO -43.533 C
	(-51.3 TO -46.4 F)
VAPOR PRESSURE:	0.413 KPA (3.103 MM HG) ~ 0.1
	REID-PSIA AT 37.778 C (100 F)
VAPOR DENSITY:	6 [AIR = 1]
	NOTE: VAPOR SPECIFIC GRAVITY
SOLUBILITY:	NEGLIGIBLE
DISPERSIBILITY PROPERTIES:	NOT DISPERSIBLE IN THE FOLLOWING

..... MATERIALS: COLD WATER.

MFG. PROTECTIVE GEAR (EXP CONTROLS/PERSONAL PROTECTION)

OCCUPATIONAL EXPOSURE LIMITS

INGREDIENT NAME	OCCUPATIONAL EXPOSURE LIMITS
TRIMETHYLBENZENE	ACGIH TLV (UNITED STATES, 1/2007).
	TWA: 123 MG/M3 8 HOUR(S).
	TWA: 25 PPM 8 HOUR(S).
NAPHTHALENE	ACGIH TLV (UNITED STATES, 1/2007).
	STEL: 79 MG/M3 15 MINUTE(S).
	STEL: 15 PPM 15 MINUTE(S).
	TWA: 52 MG/M3 8 HOUR(S).
	TWA: 10 PPM 8 HOUR(S).
	NIOSH REL (UNITED STATES, 12/2001).
	STEL: 75 MG/M3 15 MINUTE(S).
	STEL: 15 PPM 15 MINUTE(S).
	TWA: 50 MG/M3 10 HOUR(S).
	TWA: 10 PPM 10 HOUR(S).
	OSHA PEL (UNITED STATES, 11/2006).
	TWA: 50 MG/M3 8 HOUR(S).
	TWA: 10 PPM 8 HOUR(S).

OTHER RECOMMENDED EXPOSURE LIMIT VALUES:

STODDARD SOLVENT	ACGIH TLV (UNITED STATES, 1/2007).
	TWA: 525 MG/M3 8 HOUR(S).
	TWA: 100 PPM 8 HOUR(S).
	NIOSH REL (UNITED STATES, 12/2001).
	CEIL: 1800 MG/M3 15 MINUTE(S).
	TWA: 350 MG/M3 10 HOUR(S).
	OSHA PEL (UNITED STATES, 11/2006).
	TWA: 2900 MG/M3 8 HOUR(S).
	TWA: 500 PPM 8 HOUR(S).

WHILE SPECIFIC OELS FOR CERTAIN COMPONENTS MAY BE SHOWN IN THIS SECTION, OTHER COMPONENTS MAY BE PRESENT IN ANY MIST, VAPOR OR DUST PRODUCED. THEREFORE, THE SPECIFIC OELS MAY NOT BE APPLICABLE TO THE PRODUCT AS A WHOLE AND ARE PROVIDED FOR GUIDANCE ONLY.

SOME STATES MAY ENFORCE MORE STRINGENT EXPOSURE LIMITS.

CONTROL MEASURES:
USE ONLY WITH ADEQUATE VENTILATION. USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS. THE ENGINEERING CONTROLS ALSO NEED TO KEEP GAS, VAPOR OR DUST CONCENTRATIONS BELOW ANY LOWER EXPLOSIVE LIMITS. USE EXPLOSION-PROOF VENTILATION EQUIPMENT. IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY WORK PRACTICES, AIRBORNE EXPOSURES SHOULD BE CONTROLLED TO THE LOWEST EXTENT PRACTICABLE.

HYGIENE MEASURES:
WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSING.

PERSONAL PROTECTION
EYES: AVOID CONTACT WITH EYES. CHEMICAL SPLASH GOGGLES.

SKIN AND BODY: DO NOT GET ON SKIN OR CLOTHING. WEAR SUITABLE PROTECTIVE CLOTHING. IF CONDITIONS OF USE PRESENT ANY POTENTIAL FOR SKIN CONTACT, CLEAN AND IMPERVIOUS CLOTHING SUCH AS GLOVES, APRONS, BOOTS, AND FACIAL PROTECTION SHOULD BE WORN. NITRILE OR VITON GLOVE MATERIAL IS RECOMMENDED. FULL BODY COVERAGE SHOULD CONSIST OF IMPERVIOUS BOOTS AND OIL RESISTANT COATED TYVEK SUIT OR OTHER IMPERVIOUS JACKET AND PANTS. NON-IMPERVIOUS CLOTHING WHICH BECOMES CONTAMINATED WITH THIS MATERIAL SHOULD BE REMOVED PROMPTLY AND NOT REWORN UNTIL THE MATERIAL IS EFFECTIVELY REMOVED FROM THE CLOTHING.

RESPIRATORY:
USE WITH ADEQUATE VENTILATION. DO NOT BREATHE VAPOR OR MIST. USE NIOSH/MSHA-APPROVED RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE IF VAPOR CONCENTRATIONS EXCEEDS PERMISSIBLE EXPOSURE LIMIT. PROVIDE SUFFICIENT MECHANICAL, GENERAL, AND/OR LOCAL EXHAUST TO MAINTAIN EXPOSURE BELOW ANY APPLICABLE TLV OR PEL. WHERE WORK CONDITIONS MAY GENERATE AIRBORNE MISTS OF THE MATERIAL, USE A HEPA PREFILTER.

CAUTION: THE PROTECTION PROVIDED BY AIR-PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE AIR-SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN UNCONTROLLED RELEASE, IF EXPOSURE LEVELS ARE NOT KNOWN, OR IF CONCENTRATIONS EXCEED THE PROTECTION LIMITS OF AIR-PURIFYING RESPIRATOR.

HANDS:
WEAR CHEMICAL RESISTANT GLOVES. RECOMMENDED: GLOVES MADE FROM VITON OR COMPARABLE MATERIAL RESISTANT TO HYDROCARBONS.

THE CORRECT CHOICE OF PROTECTIVE GLOVES DEPENDS UPON THE CHEMICALS BEING HANDLED, THE CONDITIONS OF WORK AND USE, AND THE CONDITION OF THE GLOVES (EVEN THE BEST CHEMICALLY RESISTANT GLOVE WILL BREAK DOWN AFTER REPEATED CHEMICAL EXPOSURES). MOST GLOVES PROVIDE ONLY A SHORT TIME OF PROTECTION BEFORE THEY MUST BE DISCARDED AND REPLACED. BECAUSE SPECIFIC WORK ENVIRONMENTS AND MATERIAL HANDLING PRACTICES VARY, SAFETY PROCEDURES SHOULD BE DEVELOPED FOR EACH INTENDED APPLICATION. GLOVES SHOULD THEREFORE BE CHOSEN IN CONSULTATION WITH THE SUPPLIER/MANUFACTURER AND WITH A FULL ASSESSMENT OF THE WORKING CONDITIONS.

CONSULT YOUR SUPERVISOR OR S.O.P. FOR SPECIAL HANDLING INSTRUCTIONS.

ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS
AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR).

PERSONAL PROTECTION IN CASE OF A LARGE SPILL
CHEMICAL SPLASH GOGGLES. CHEMICAL-RESISTANT PROTECTIVE SUIT. BOOTS. CHEMICAL-RESISTANT GLOVES. SELF-CONTAINED BREATHING APPARATUS (SCBA) SHOULD BE USED TO AVOID INHALATION OF THE PRODUCT. SUGGESTED PROTECTIVE CLOTHING MIGHT NOT BE ADEQUATE. CONSULT A SPECIALIST BEFORE HANDLING THIS PRODUCT. CAUTION: THE PROTECTION PROVIDED BY AIR-PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE AIR-SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN UNCONTROLLED RELEASE, IF EXPOSURE LEVELS ARE NOT KNOWN, OR IF CONCENTRATIONS EXCEED THE PROTECTION LIMITS OF AIR-PURIFYING RESPIRATOR.

METHODS FOR CLEANING UP
LARGE SPILL
STOP LEAK IF WITHOUT RISK. ELIMINATE ALL IGNITION SOURCES. MOVE CONTAINERS FROM SPILL AREA. APPROACH RELEASE FROM UPWIND. PREVENT ENTRY INTO SEWERS,

WATER COURSES, BASEMENTS OR CONFINED AREAS. WASH SPILLAGES INTO AN EFFLUENT TREATMENT PLANT OR PROCEED AS FOLLOWS. CONTAIN AND COLLECT SPILLAGE WITH NON-COMBUSTIBLE, ABSORBENT MATERIAL E.G. SAND, EARTH, VERMICULITE OR DIATOMACEOUS EARTH AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE DISPOSAL CONSIDERATIONS SECTION). USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR. CONTAMINATED ABSORBENT MATERIAL MAY POSE THE SAME HAZARD AS THE SPILLED PRODUCT. NOTE: SEE PRODUCT AND COMPANY IDENTIFICATION SECTION FOR EMERGENCY CONTACT INFORMATION AND DISPOSAL CONSIDERATIONS SECTION FOR WASTE DISPOSAL.

SMALL SPILL
STOP LEAK IF WITHOUT RISK. MOVE CONTAINERS FROM SPILL AREA. DILUTE WITH WATER AND MOP UP IF WATER-SOLUBLE OR ABSORB WITH AN INERT DRY MATERIAL AND PLACE IN AN APPROPRIATE WASTE DISPOSAL CONTAINER. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

HANDLING & STORAGE

HANDLING
PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE PERSONAL PROTECTION SECTION). WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. PERSONS WITH A HISTORY OF SKIN SENSITIZATION PROBLEMS SHOULD NOT BE EMPLOYED IN ANY PROCESS IN WHICH THIS PRODUCT IS USED. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. DO NOT BREATHE VAPOR OR MIST. DO NOT INGEST. USE ONLY WITH ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. DO NOT ENTER STORAGE AREAS AND CONFINED SPACES UNLESS ADEQUATELY VENTILATED. STORE AND USE AWAY FROM HEAT, SPARKS, OPEN FLAME OR ANY OTHER IGNITION SOURCE. USE EXPLOSION-PROOF ELECTRICAL (VENTILATING, LIGHTING AND MATERIAL HANDLING) EQUIPMENT. USE NON-SPARKING TOOLS. TAKE PRECAUTIONARY MEASURES AGAINST ELECTROSTATIC DISCHARGES. TO AVOID FIRE OR EXPLOSION, DISSIPATE STATIC ELECTRICITY DURING TRANSFER BY GROUNDING AND BONDING CONTAINERS AND EQUIPMENT BEFORE TRANSFERRING MATERIAL. SPECIAL SLOW LOAD PROCEDURES FOR "SWITCH LOADING" MUST BE FOLLOWED TO AVOID THE STATIC IGNITION HAZARD THAT CAN EXIST WHEN THIS MATERIAL IS LOADED INTO TANKS PREVIOUSLY CONTAINING GASOLINE OR OTHER LOW FLASH POINT PRODUCTS (SEE API PUBLICATION 2003).

STORAGE
STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN A SEGREGATED AND APPROVED AREA. STORE AWAY FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS (SEE STABILITY & REACTIVITY SECTION). ELIMINATE ALL IGNITION SOURCES. SEPARATE FROM OXIDIZING MATERIALS. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

OTHER INFORMATION
DO NOT ENTER STORAGE TANKS WITHOUT BREATHING APPARATUS UNLESS THE TANK HAS BEEN WELL VENTILATED AND THE TANK ATMOSPHERE HAS BEEN SHOWN TO CONTAIN HYDROCARBON VAPOUR CONCENTRATIONS OF LESS THAN 1% OF THE LOWER FLAMMABILITY LIMIT AND AN OXYGEN CONCENTRATION OF AT LEAST 20% VOLUME.

LIGHT HYDROCARBON VAPORS CAN BUILD UP IN THE HEADSPACE OF TANKS. THESE CAN CAUSE FLAMMABILITY/EXPLOSION HAZARDS EVEN AT TEMPERATURES BELOW THE NORMAL FLASH POINT (NOTE: FLASH POINT MUST NOT BE REGARDED AS A RELIABLE INDICATOR OF THE POTENTIAL FLAMMABILITY OF VAPOR IN TANK HEADSPACES). TANK HEADSPACES

SHOULD ALWAYS BE REGARDED AS POTENTIALLY FLAMMABLE AND CARE SHOULD BE TAKEN TO AVOID STATIC ELECTRICAL DISCHARGE AND ALL IGNITION SOURCES DURING FILLING, ULLAGING AND SAMPLING FROM STORAGE TANKS. WHEN THE PRODUCT IS PUMPED (E.G. DURING FILLING, DISCHARGE OR ULLAGING) AND WHEN SAMPLING, THERE IS A RISK OF STATIC DISCHARGE. ENSURE EQUIPMENT USED IS PROPERLY EARTHED OR BONDED TO THE TANK STRUCTURE. ELECTRICAL EQUIPMENT SHOULD NOT BE USED UNLESS IT IS INTRINSICALLY SAFE (I.E. WILL NOT PRODUCE SPARKS).

ECOLOGICAL INFORMATION

NO TESTING HAS BEEN PERFORMED BY THE MANUFACTURER.

DISPOSAL CONSIDERATIONS

WASTE INFORMATION
THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE. DISPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR. DISPOSAL OF THIS PRODUCT, SOLUTIONS AND ANY BY-PRODUCTS SHOULD AT ALL TIMES COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL LEGISLATION AND ANY REGIONAL LOCAL AUTHORITY REQUIREMENTS. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS.

NOTE: THE GENERATOR OF WASTE HAS THE RESPONSIBILITY FOR PROPER WASTE IDENTIFICATION (BASED ON CHARACTERISTIC(S) OR LISTING), TRANSPORTATION AND DISPOSAL.

TRANSPORT INFORMATION

INTERNATIONAL TRANSPORT REGULATIONS
REGULATORY INFORMATION
DOT CLASSIFICATION
UN NUMBER: ----
PROPER SHIPPING NAME: PROPER CLASSIFICATION TO BE DETERMINED AT THE TIME OF SHIPMENT
CLASS: ----
PACKING GROUP: ----
ADDITIONAL INFORMATION: ----

TDG CLASSIFICATION
UN NUMBER: ----
PROPER SHIPPING NAME: PROPER CLASSIFICATION TO BE DETERMINED AT THE TIME OF SHIPMENT
CLASS: ----
PACKING GROUP: ----
ADDITIONAL INFORMATION: ----

IMDG CLASSIFICATION
UN NUMBER: ----
PROPER SHIPPING NAME: PROPER CLASSIFICATION TO BE DETERMINED AT THE TIME OF SHIPMENT
CLASS: ----
PACKING GROUP: ----
ADDITIONAL INFORMATION: ----

IATA/ICAO CLASSIFICATION
UN NUMBER: ----

PROPER SHIPPING NAME: PROPER CLASSIFICATION TO BE DETERMINED AT THE TIME OF SHIPMENT
CLASS: ----
PACKING GROUP: ----
ADDITIONAL INFORMATION: ----

REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
UNITED STATES INVENTORY (TSCA 8B): ALL COMPONENTS ARE LISTED OR EXEMPTED.

TSCA 12(B) ONE-TIME EXPORT: NAPHTHALENE

SARA 302/304/311/312 EXTREMELY HAZARDOUS SUBSTANCES: NO PRODUCTS WERE FOUND.
SARA 302/304 EMERGENCY PLANNING AND NOTIFICATION: NO PRODUCTS WERE FOUND.
SARA 302/304/311/312 HAZARDOUS CHEMICALS: NAPHTHALENE; TRIMETHYLBENZENE; STODDARD SOLVENT
SARA 311/312 MSDS DISTRIBUTION - CHEMICAL INVENTORY - HAZARD IDENTIFICATION: SWEET DISTILLATE: FIRE HAZARD, IMMEDIATE (ACUTE) HEALTH HAZARD, DELAYED (CHRONIC) HEALTH HAZARD

SARA 313

PRODUCT NAME	CAS NUMBER	CONCENTRATION
FORM R - REPORTING REQUIREMENTS		
NAPHTHALENE	91-20-3	0.5 - 1
SUPPLIER NOTIFICATION		
NAPHTHALENE	91-20-3	0.5 - 1

CERCLA SECTIONS 102A/103 HAZARDOUS SUBSTANCES (40 CFR PART 302.4):
CERCLA: HAZARDOUS SUBSTANCES.: NAPHTHALENE: 100 LBS. (45.4 KG); XYLENE: 100 LBS. (45.4 KG); BENZENE: 10 LBS. (4.54 KG); TOLUENE: 1000 LBS. (454 KG);

STATE REGULATIONS
MASSACHUSETTS SUBSTANCES
MASSACHUSETTS SUBSTANCES: THE FOLLOWING COMPONENTS ARE LISTED: TRIMETHYL BENZENE;NAPHTHALENE

NEW JERSEY HAZARDOUS SUBSTANCES
NEW JERSEY HAZARDOUS SUBSTANCES: THE FOLLOWING COMPONENTS ARE LISTED: TRIMETHYL BENZENE; NAPHTHALENE;TOLUENE

PENNSYLVANIA RTK HAZARDOUS SUBSTANCES
PENNSYLVANIA RTK HAZARDOUS SUBSTANCES: THE FOLLOWING COMPONENTS ARE LISTED: BENZENE, TRIMETHYL-; NAPHTHALENE;BENZENE, METHYL

CALIFORNIA PROP. 65
WARNING:
THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.
NAPHTHALENE

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.
TOLUENE

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.
BENZENE

MSDS Data

SWEET DISTILLATE RS00203

INVENTORIES
CANADA INVENTORY: ALL COMPONENTS ARE LISTED OR EXEMPTED.
EUROPE INVENTORY: ALL COMPONENTS ARE LISTED OR EXEMPTED.
AUSTRALIA INVENTORY (AICS): ALL COMPONENTS ARE LISTED OR EXEMPTED.
CHINA INVENTORY (IECSC): ALL COMPONENTS ARE LISTED OR EXEMPTED.
JAPAN INVENTORY (ENCS): NOT DETERMINED.
KOREA INVENTORY (KECI): ALL COMPONENTS ARE LISTED OR EXEMPTED.
PHILIPPINES INVENTORY (PICCS): ALL COMPONENTS ARE LISTED OR EXEMPTED.

OTHER INFORMATION

LABEL REQUIREMENTS
WARNING !
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
ASPIRATION HAZARD.
HARMFUL OR FATAL IF LIQUID IS ASPIRATED INTO LUNGS.
HARMFUL IF SWALLOWED.
INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA, AND MAY LEAD TO UNCONSCIOUSNESS.
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

HMIS (R) RATING :

HEALTH	* 1
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)

HEALTH	1
FIRE HAZARD	2
INSTABILITY	0
SPECIFIC HAZARD	-

HISTORY
DATE OF ISSUE: 04/28/2008.
DATE OF PREVIOUS ISSUE: 03/24/2008.

PREPARED BY: PRODUCT STEWARDSHIP

NOTICE TO READER
NOTICE : THIS MATERIAL SAFETY DATA SHEET IS BASED UPON DATA CONSIDERED TO BE ACCURATE AT THE TIME OF ITS PREPARATION. DESPITE OUR EFFORTS, IT MAY NOT BE UP TO DATE OR APPLICABLE TO THE CIRCUMSTANCES OF ANY PARTICULAR CASE. WE ARE NOT RESPONSIBLE FOR ANY DAMAGE OR INJURY RESULTING FROM ABNORMAL USE, FROM ANY FAILURE TO FOLLOW APPROPRIATE PRACTICES OR FROM HAZARDS INHERENT IN THE NATURE OF THE PRODUCT.

PRODUCT NAME: SWEET DISTILLATE PRODUCT CODE: RS203
VERSION: 1 DATE OF ISSUE 04/28/2008.
FORMAT US-COMP (US-COMP) LANGUAGE ENGLISH. (ENGLISH)

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Chevron and Texaco Premium Unleaded Gasoline

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON and TEXACO PREMIUM UNLEADED GASOLINES

Product Use: Fuel
Product Number(s): CPS201019 [See Section 16 for Additional Product Numbers]
Synonyms: Calco Premium Gasoline, Chevron Premium Unleaded Gasoline, Chevron Supreme Plus Unleaded Gasoline, Chevron Supreme Unleaded Gasoline, Gasolines, Automotive, Texaco Power Premium Unleaded Gasoline
Company Identification
Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
MSDS Requests: http://www.chevron.com/contact
Technical Information: (510) 242-5357

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %vol/vol
Benzene	71-43-2	0.1 - 4.9 %vol/vol
Toluene (methylbenzene)	108-88-3	1 - 25 %vol/vol
Ethyl benzene	100-41-4	0.1 - 3 %vol/vol
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	1330-20-7	1 - 15 %vol/vol
Butane	106-97-8	1 - 12 %vol/vol
Heptane	142-82-5	1 - 4 %vol/vol
Hexane	110-54-3	1 - 5 %vol/vol
Cyclohexane	110-82-7	1 - 3 %vol/vol
Methylcyclohexane	108-87-2	1 - 2 %vol/vol
Pentane, 2,2,4-trimethyl- (Isooctane)	540-84-1	1 - 13 %vol/vol
Naphthalene	91-20-3	0.1 - 2 %vol/vol
Ethanol	64-17-5	0 - 10 %vol/vol

Methyl tert-butyl ether (MTBE)	1634-04-4	<= 0.1 %vol/vol

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 3 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW

- EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE
- CAUSES SKIN IRRITATION
- HARMFUL OR FATAL IF SWALLOWED - MAY CAUSE LUNG DAMAGE IF SWALLOWED
- MAY CAUSE DIZZINESS, DROWSINESS AND REDUCED ALERTNESS
- VAPOR HARMFUL
- MAY CAUSE CANCER BASED ON ANIMAL DATA
- KEEP OUT OF REACH OF CHILDREN
- MAY CAUSE RESPIRATORY TRACT IRRITATION IF INHALED
- TOXIC TO AQUATIC ORGANISMS. MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

****

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.
Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: This material is not expected to cause birth defects or other harm to the developing fetus based on animal data.
Cancer: Prolonged or repeated exposure to this material may cause cancer. Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP)

and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.
Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid.

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)
Autoignition: > 280 °C (> 536 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6 (Typical)

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam if >15% volume polar solvents (oxygenates).

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: Use water spray to cool fire-exposed containers and to protect personnel. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Never siphon gasoline by mouth.
Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Do not get in eyes, on skin, or on clothing. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.
Unusual Handling Hazards: WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA SRS	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Butane	ACGIH	1000 ppm (weight)	--	--	--
Cyclohexane	ACGIH	100 ppm (weight)	--	--	--
Cyclohexane	OSHA Z-1	1050 mg/m3	--	--	--
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4
Ethanol	OSHA Z-1	1900 mg/m3	--	--	--
Ethyl benzene	ACGIH	100 ppm (weight)	125 ppm (weight)	--	A3

Ethyl benzene	OSHA Z-1	435 mg/m3	--	--	--
Gasoline	ACGIH	300 ppm (weight)	500 ppm (weight)	--	A3
Heptane	ACGIH	400 ppm (weight)	500 ppm (weight)	--	--
Heptane	OSHA Z-1	2000 mg/m3	--	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Methyl tert-butyl ether (MTBE)	ACGIH	50 ppm (weight)	--	--	A3
Methyl tert-butyl ether (MTBE)	CVX	--	50 ppm	--	--
Methylcyclohexane	ACGIH	400 ppm (weight)	--	--	--
Methylcyclohexane	OSHA Z-1	2000 mg/m3	--	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm (weight)	--	Skin
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	ACGIH	300 ppm (weight)	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	OSHA Z-1	2350 mg/m3	--	--	--
Toluene (methylbenzene)	ACGIH	50 ppm (weight)	--	--	Skin A4
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	ACGIH	100 ppm (weight)	150 ppm (weight)	--	A4
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	OSHA Z-1	435 mg/m3	--	--	--

Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product. Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)
Vapor Density (Air = 1): 3 - 4 (Typical)
Boiling Point: 37.8°C (100°F) - 204.4°C (400°F) (Typical)
Solubility: Insoluble in water; miscible with most organic solvents.
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.7 g/ml - 0.8 g/ml @ 15.6°C (60.1°F) (Typical)
Viscosity: <1 SUS @ 37.8°C (100°F)
Evaporation Rate: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.
Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.
Acute Dermal Toxicity: LD50: >3.75g/kg (rabbit).

Acute Oral Toxicity: LD50: >5 ml/kg (rat)

Acute Inhalation Toxicity: 4 hour(s) LD50: >20000mg/m3 (rat).
Subchronic Effects: Exposure of rats for 13 weeks (6 hr/day for 5 days/week) to the light ends of gasoline (up to 20,000 mg/m3) resulted in minimal responses of toxicity. There were no indications of neurotoxicity based morphological, functional and biochemical indices. There was also no evidence of immunotoxicity in the rats. However, when rats were exposed to gasoline vapor containing ethanol up to 20,000 mg/m3 there was evidence of both humoral immune suppression and mild astrogliosis.
Reproduction and Birth Defects: Exposure of rats to the light ends of gasoline at up to 20,000 mg/m3 had generally no impact upon reproductive abilities and did not cause birth defects. **Genetic Toxicity:** Gasoline was not mutagenic, with or without activation, in the Ames assay (Salmonella typhimurium), Saccharamyces cerevisesae, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells. Inhalation exposure of rats to the light ends of gasoline caused increased sister chromatid exchange in their peripheral white blood cells but did not cause an increase in micronucleated red blood cells in their bone marrow.
ADDITIONAL TOXICOLOGY INFORMATION:
Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this MSDS. More detailed information on the health hazard of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).
Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.
To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)
48 hour(s) LC50: 3.0 mg/l (Daphnia magna)
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

ENVIRONMENTAL FATE

Ready Biodegradability: This material is expected to be readily biodegradable. Following spillage, the

more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: UN1203, GASOLINE, 3, II

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5

ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Benzene	01-1, 02, 04, 05, 06, 07
Butane	05, 06, 07
Cyclohexane	03, 05, 06, 07
Ethanol	01-1, 02, 04, 05, 06, 07

Ethyl benzene	01-2B, 04, 05, 06, 07
Gasoline	01-2B, 06, 07
Heptane	05, 06, 07
Hexane	03, 05, 06, 07
Methyl tert-butyl ether (MTBE)	03, 05, 06, 07
Methylcyclohexane	05, 06, 07
Naphthalene	01-2B, 02, 03, 04, 05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane)	05, 06, 07
Toluene (methylbenzene)	03, 04, 05, 06, 07
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Butane	100 lbs	None	725 lbs
Cyclohexane	1000 lbs	None	34188 lbs
Ethanol	100 lbs	None	1934 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Gasoline	100 lbs	None	107 lbs
Heptane	100 lbs	None	3442 lbs
Hexane	5000 lbs	None	129149 lbs
Methyl tert-butyl ether (MTBE)	1000 lbs	None	1080351 lbs
Methylcyclohexane	100 lbs	None	4278 lbs
Naphthalene	100 lbs	None	4000 lbs
Pentane, 2,2,4-trimethyl- (Isooctane)	1000 lbs	None	6270 lbs
Toluene (methylbenzene)	1000 lbs	None	3678 lbs
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	100 lbs	None	649 lbs

WHMIS CLASSIFICATION:
Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision A: Very Toxic Material - Carcinogenicity
Class D, Division 2, Subdivision B: Toxic Material - Skin or Eye Irritation
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 3 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): CPS201024, CPS201050, CPS201051, CPS201058, CPS201060, CPS201061, CPS201066, CPS201068, CPS201069, CPS201071, CPS201072, CPS201078, CPS201081, CPS201084, CPS201085, CPS201088, CPS201091, CPS201092, CPS201094, CPS201096, CPS201097, CPS201098, CPS201101, CPS201103, CPS201114, CPS201117, CPS201193, CPS201213, CPS201214, CPS201215, CPS201233, CPS201234, CPS201235, CPS201263, CPS201264, CPS201265, CPS201274, CPS201275, CPS201276, CPS201283, CPS201284, CPS201285, CPS201293, CPS201294, CPS201295, CPS201853, CPS201854, CPS201861, CPS201862, CPS201863, CPS204006, CPS204007, CPS204008, CPS204009, CPS204014, CPS204015, CPS204026, CPS204027, CPS204050, CPS204051, CPS204074, CPS204075, CPS204092, CPS204093, CPS204108, CPS204109, CPS204120, CPS204121, CPS204144, CPS204145, CPS204168, CPS204169, CPS204192, CPS204193, CPS204204, CPS204205, CPS204211, CPS204216, CPS204217, CPS204228, CPS204229, CPS204252, CPS204253, CPS204276, CPS204277, CPS204294, CPS204295, CPS204327, CPS204328, CPS204329, CPS204351, CPS204353, CPS204355, CPS204357, CPS204362, CPS204363, CPS204368, CPS204369, CPS204374, CPS204375, CPS204380, CPS204381, CPS204386, CPS204387, CPS204392, CPS204393, CPS204398, CPS204399, CPS204404, CPS204405, CPS204410, CPS204411, CPS204416, CPS204417, CPS204422, CPS204423, CPS204428, CPS204429, CPS204434, CPS204435, CPS204440, CPS204441, CPS204443, CPS204447, CPS204451, CPS204455, CPS204459, CPS204463, CPS204470, CPS204471, CPS204488, CPS204489, CPS204506, CPS204507, CPS204524, CPS204525, CPS204542, CPS204543, CPS204560, CPS204561, CPS204578, CPS204579, CPS204596, CPS204597, CPS204614, CPS204615, CPS204632, CPS204633, CPS204650, CPS204651, CPS204668, CPS204669, CPS204683, CPS204694, CPS204695, CPS204700, CPS204701, CPS204706, CPS204707, CPS204712, CPS204713, CPS204725, CPS204726, CPS204731, CPS204732, CPS204741, CPS241766
REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 2, 3, 4, 8, 11, 15
Revision Date: MAY 10, 2011

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Chevron Regular Unleaded Gasoline

Material Safety Data Sheet

Chevron Regular Unleaded Gasoline

MSDS: 2655 Revision #: 32 Revision Date: 11/28/01

Click here to search the product data sheet database

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEVRON REGULAR UNLEADED GASOLINE

PRODUCT NUMBER(S): CPS201000 CPS201023 CPS201054 CPS201055
CPS201075 CPS201090 CPS201105 CPS201106
CPS201110 CPS201116 CPS201118 CPS201119
CPS201120 CPS201121 CPS201122 CPS201126
CPS201128 CPS201131 CPS201136 CPS201141
CPS201142 CPS201148 CPS201153 CPS201158
CPS201161 CPS201162 CPS201168 CPS201181
CPS201185 CPS201186 CPS201188 CPS201216
CPS201217 CPS201218 CPS201236 CPS201237
CPS201238 CPS201266 CPS201267 CPS201268
CPS201277 CPS201278 CPS201279 CPS201286
CPS201287 CPS201289 CPS201296 CPS201297
CPS201298 CPS201849 CPS201850 CPS201855
CPS201856 CPS201857 CPS201864 CPS201865
CPS203397 CPS241765

SYNONYM: Calco Regular Unleaded Gasoline

COMPANY IDENTIFICATION

Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (703)527-3887
Emergency Information Centers
are located in U.S.A.
Int'l collect calls accepted

PRODUCT INFORMATION: MSDS Requests and Technical Information:
(800) 689-3998

SPECIAL NOTES: This MSDS applies to: Federal Reformulated Gasoline, California Reformulated Gasoline, Wintertime Oxygenated Gasoline, Low RVP Gasoline and Conventional Gasoline.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CHEVRON REGULAR UNLEADED GASOLINE

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
GASOLINE (GENERIC)	100.00%	890 mg/m3	ACGIH TWA
		1480 mg/m3	ACGIH STEL
		2000 mg/m3	OSHA PEL
POTENTIALLY			
INCLUDING			
BENZENE			
Chemical Name: BENZENE			
CAS71432	< 4.90%	0.5 ppm	ACGIH TWA
		2.5 ppm	ACGIH STEL
		1 ppm	OSHA PEL
		5 ppm	OSHA STEL
		10 LBS	CERCLA 302.4 RQ
ETHYL BENZENE			
Chemical Name: BENZENE, ETHYL-			
CAS100414		100 ppm	ACGIH TWA
		125 ppm	ACGIH STEL
		100 ppm	OSHA PEL
		1,000 LBS	CERCLA 302.4 RQ
XYLENE			
Chemical Name: BENZENE, DIMETHYL-			
CAS1330207		100 ppm	ACGIH TWA
		150 ppm	ACGIH STEL
		100 ppm	OSHA PEL
		100 LBS	CERCLA 302.4 RQ
TOLUENE			
Chemical Name: TOLUENE			
CAS108883		50 ppm	ACGIH TWA
		200 ppm	OSHA PEL
		300 ppm	OSHA CEILING
		1,000 LBS	CERCLA 302.4 RQ
N-BUTANE			
Chemical Name: N-BUTANE			
CAS106978		800 ppm	ACGIH TWA
N-HEPTANE			
Chemical Name: N-HEPTANE			
CAS142825		400 ppm	ACGIH TWA
		500 ppm	ACGIH STEL
		500 ppm	OSHA PEL
N-HEXANE			
Chemical Name: N-HEXANE			
CAS110543		50 ppm	ACGIH TWA
		500 ppm	OSHA PEL
		5,000 LBS	CERCLA 302.4 RQ

HEXANE ISOMERS (OTHER THAN N)			
HEXANES			
		500 ppm	ACGIH TWA
		1000 ppm	ACGIH STEL
PENTANE (ALL ISOMERS)			
PENTANES			
		600 ppm	ACGIH TWA
		750 ppm	ACGIH STEL
		1000 ppm	OSHA PEL
CYCLOHEXANE			
Chemical Name: CYCLOHEXANE			
CAS110827		300 ppm	ACGIH TWA
		300 ppm	OSHA PEL
		1,000 LBS	CERCLA 302.4 RQ
METHYLCYCLOHEXANE			
Chemical Name: CYCLOHEXANE, METHYL			
CAS108872		400 ppm	ACGIH TWA
		500 ppm	OSHA PEL
TRIMETHYLBENZENE			
Chemical Name: BENZENE, TRIMETHYL-			
CAS25551137		25 ppm	ACGIH TWA
2,2,4-TRIMETHYLPENTANE			
Chemical Name: 2,2,4-TRIMETHYLPENTANE			
CAS540841		1,000 LBS	CERCLA 302.4 RQ
CAN CONTAIN			
METHYL TERT BUTYL ETHER (MTBE)			
Chemical Name: 2-METHOXY-2-METHYL PROPANE			
CAS1634044	< 15.00%	40 ppm	ACGIH TWA
		50 ppm	Chevron STEL
		1,000 LBS	CERCLA 302.4 RQ
ETHYL TERT BUTYL ETHER (ETBE)			
Chemical Name: 2-ETHOXY-2-METHYL PROPANE			
CAS637923	< 18.00%	NONE	NA
TERT-AMYL METHYL ETHER (TAME)			
Chemical Name: 2-METHOXY-2-METHYL-BUTANE			
CAS994058	< 17.00%	50 ppm	Chevron STEL
OR			
ETHANOL			
Chemical Name: ETHYL ALCOHOL			
CAS64175	< 10.00%	1000 ppm	ACGIH TWA
		1000 ppm	OSHA PEL

COMPOSITION COMMENT:
Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product.

Motor gasoline is considered a mixture by EPA under the Toxic Substances

all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations. Ethyl Alcohol is only added in limited specific distribution areas.

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3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

Colorless to yellow liquid with a gasoline hydrocarbon odor.

- EXTREMELY FLAMMABLE
- HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
- VAPOR HARMFUL
- MAY CAUSE EYE AND SKIN IRRITATION
- LONG-TERM EXPOSURE TO VAPOR HAS CAUSED CANCER IN LABORATORY ANIMALS
- KEEP OUT OF REACH OF CHILDREN

****

IMMEDIATE HEALTH EFFECTS
EYE:
Contact with the eyes causes irritation. Eye contact with the vapors, fumes, or spray mist from this substance could also cause similar signs and symptoms.
SKIN:
Contact with the skin causes irritation. Not expected to be harmful to internal organs if absorbed through the skin. Prolonged or frequently repeated contact may cause the skin to become cracked or dry from the defatting action of this material.
INGESTION:
Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death.
INHALATION:
May be harmful if inhaled. Breathing the vapors at concentrations above the recommended exposure standard can cause central nervous system effects. The vapor or fumes from this material may cause respiratory irritation.
SIGNS AND SYMPTOMS OF EXPOSURE:
Eye damage or irritation: may include pain, tearing, reddening, swelling, and impaired vision. Skin injury: may include pain, discoloration, swelling, and blistering. Respiratory irritation: may include coughing and difficulty breathing. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.
CARCINOGENICITY:
Risk depends on duration and level of exposure. See Section 11 for

carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains chemical(s) known to the State of California to cause cancer. Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP), and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust was reviewed by the International Agency for Research on Cancer (IARC) in their Monograph Volume 46 (1989). Evidence for causing cancer was considered inadequate in animals and inadequate in humans. IARC placed whole gasoline exhaust in Category 2B, considering it possibly carcinogenic to humans.

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4. FIRST AID MEASURES

EYE:
Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.
SKIN:
Wash skin immediately with soap and water and remove contaminated clothing and shoes. Get medical attention if irritation persists. Discard contaminated clothing and shoes or thoroughly clean before reuse.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.
INHALATION:
Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.
NOTE TO PHYSICIANS:
Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid. See section 7 for appropriate handling and storage conditions.
FLAMMABLE PROPERTIES:
FLASH POINT: (TCC) < -49F (<-45C)
AUTOIGNITION: 536-835F (280-460C) NFPA
FLAMMABILITY LIMITS (% by volume in air): Lower: 1.4 Upper: 7.6
EXTINGUISHING MEDIA:
Dry Chemical, CO2, AFFF Foam or alcohol resistant foam if >15% volume polar solvents (oxygenates).
NFPA RATINGS: Health 1; Flammability 3; Reactivity 0.
FIRE FIGHTING INSTRUCTIONS:
Use water spray to cool fire-exposed containers and to protect personnel.

fire space without proper protective equipment, including self-contained breathing apparatus.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887
International Collect Calls Accepted
ACCIDENTAL RELEASE MEASURES:
Eliminate all sources of ignition in the vicinity of the spill or released vapor.

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, "Flammable and Combustible Liquids", National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity", and/or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents".

Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline

nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

Never siphon gasoline by mouth. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
EYE/FACE PROTECTION:
No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
SKIN PROTECTION:
No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Nitrile> <Polyurethane> <Viton> <Chlorinated Polyethylene (or Chlorosulfonated Polyethylene or CPE)>
RESPIRATORY PROTECTION:
Determine if airborne concentrations are below the recommended exposure limits. If not, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following respirators: Organic Vapor. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Colorless to yellow liquid with a gasoline hydrocarbon odor.

pH:	NA
VAPOR PRESSURE:	5 - 15 PSI @ 100F (REID)
VAPOR DENSITY (AIR=1):	3-4 (NFPA)
BOILING POINT:	25 - 225C
FREEZING POINT:	NA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbons; insoluble in water.
SPECIFIC GRAVITY:	0.7 - 0.8 @ 15.6/15.6C

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
None known
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
See section 7.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
The mean 24-hour Draize eye irritation score in rabbits is 0.
SKIN EFFECTS:
This material was not a skin sensitizer in the modified Buehler Guinea Pig Sensitization Test. For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8.
ACUTE ORAL EFFECTS:
The oral LD50 in rats is > 5 ml/kg.
ACUTE INHALATION EFFECTS:
No product toxicology data available.
ADDITIONAL TOXICOLOGY INFORMATION:
When vapor exposures are low, or short duration and infrequent, such as during refuelling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor and liquid is potentially high, attention should be paid to potential toxic effects of specific components in addition to those of total hydrocarbons. Information about specific components in gasoline are found in Section 1 and Section 15 of this MSDS. More detailed information on the health hazard of specific gasoline components can be obtain from the Chevron Emergency Information Center (see Section 1 for telephone numbers).

A study was done in which ten volunteers were exposed for 30 minutes to about 200, 500 or 1000 ppm concentrations of the vapor of three different

observed, based on both subjective and objective assessments.

An inhalation study with rats exposed to 0, 400 and 1600 ppm of wholly vaporized unleaded gasoline, 6 hours per day on day 6 through 16 of gestation, showed no teratogenic effects nor indication of toxicity to either the mother or the fetus (sex ratio, embryotoxicity, fetal growth and development).

An inhalation study with pregnant rats exposed to 0, 1000, 3000, and 9000 ppm of unleaded gasoline vapor, 6 hours per day on days 6 through 20 of gestation, showed no teratogenic effects nor indications of toxicity to either the mother or the fetus.

In an inhalation study, groups of 6 Fischer rats (3 male, 3 female) were exposed to 2056 ppm of wholly vaporized unleaded gasoline for 6 hours per day, 5 day per week for up to 18 months. Histopathology of the peripheral nervous system and spinal cord revealed no distal axonal neuropathy of the type associated with exposure to n-hexane even though gasoline contained 1.9% n-hexane. The authors concluded that gasoline treatment may have amplified the incidence and prominence of some naturally occurring age related changes in the nervous system.

Wholly vaporized unleaded gasoline was used in a 3 month inhalation study. Groups of 40 rats (20 males, 20 female) and 8 squirrel monkeys (4 male, 4 female) were exposed 6 hours per day and 5 days per week for 13 weeks to 384 or 1552 ppm gasoline. One group of each species served as unexposed controls. The initial conclusion of this study was that inhalation of gasoline at airborne concentrations of up to 1522 ppm caused no toxicity in rats or monkeys. However, further histopathological examination of male rat kidneys on the highest dose group revealed an increased incidence and severity of regenerative epithelium and dilated tubules containing proteinaceous deposits.

Rabbits were exposed to unleaded gasoline 24 hour per day, 5 days per week for two weeks; 0, 2.5, 5 or 8 ml were applied to the skin under an occlusive dressing. Applied in such a way, this motor gasoline was corrosive to the rabbit skin and animals in all dose groups had decreased bodyweights. The slight and/or isolated systemic effects noted in the study were judged to be not significant.

Unleaded gasoline was assayed for mutagenic and cytogenetic activity. Gasoline was not mutagenic, either with or without activation, in Ames assay (Salmonella typhimurium), Saccharamyces cerevisesae, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes exposed to gasoline in vivo. The gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells.

In a lifetime skin painting study, 50 male Swiss mice were treated with 0.05 ml of unleaded gasoline three times per week. Positive control groups were treated with benzo(a)pyrene in acetone; an untreated negative control group was also included. The repeated exposure to gasoline caused severe skin irritation, ulceration, hyperkeratosis and abscesses. There was no statistically significant increase in the incidence of skin tumors. Histopathology at the end of the study showed that unleaded gasoline did not increase the incidence of tumors in other organs.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has

response is still being investigated but is thought to be an epigenetic process unique to the female mouse. This exposure also caused kidney damage and eventually kidney cancer in male rats. No other animal model studied has shown these adverse kidney effects and there is no physiological reason to believe that they would occur in man. EPA has concluded that the mechanism by which wholly vaporzied unleaded gasoline causes kidney damage is unique to the male rat. The response in that species (kidney damage and cancer) should not be used in human risk assessment.

In their 1988 review of carcinogenic risk from gasoline, The Internatioal Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene and 1, 3-butadiene. The actual evidence for cacinogenicity in humans was considered inadequate.

To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality, a nested case-control, and an exposure assessment study. Histories of exposure to gasoline were reconstructed for a cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. Data were analyzed based on length of employment, length of exposure, job category, age at first exposure and estimated cumulative and peak exposures. Cumulative exposure was defined as the sum of products of TWA exposure and duration of exposure of each job in an employee's work history. Amoung cohort members, cumulative exposure ranged from 2 to 8,000 ppm-years. In general, long-term drivers at small terminals had the highest exposures, and short-term workers with "other terminal jobs" had the lowest. A peak exposure was defined as an episode in excess of 500 ppm lasting 15 to 90 minutes.

The results of the cohort study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure.

For acute myeloid leukemia (AML), a non-significant mortality increase was found in land-based terminal employees, but no trend was detected when the data were analyzed by various gasoline exposure indices. This non-significant excess was limited to land-based terminal employees hired prior to 1948. On the other hand, a deficit of mortality from AML was observed among marine employees.

In addition to the cohort study, a subsequent nested case-control study was also conducted. Four diseases were selected for analysis in the case-control study: Leukemia (all cell types), AML, kidney cancer and multiple myeloma. For each case, five individually matched controls were randomly selected from the cohort. In the original cohort study, broad generic job categories were used as part of exposure assessment. In the

developed. In addition to job category, several quantitative gasoline exposure indices were used in the case-control analysis: length of exposure, cumulative exposure (ppm-years in terms of total hydrocarbons) and frequency of peak exposure. Time period of first exposure to gasoline (1948 or before and 1949 or after) was also included as an exposure index. Results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

---

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

The 96-hour LC50 in rainbow trout (Oncorhynchus mykiss) is 2.7 mg/l (BTEX). The 48-hour LC50 in daphnia (Daphnia magna) is 3.0 mg/l (BTEX). The 96-hour LC50 in sheepshead minnow (Cyprinodon variegatus) is 8.3 mg/l (BTEX). The 96-hour LC50 in mysid shrimp (Mysidopsis bahia) is 1.8 mg/l (BTEX).
ENVIRONMENTAL FATE:
Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline. The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

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13. DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible.

hazardous waste as defined by USEPA under RCRA (40CFR261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

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14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: GASOLINE
DOT HAZARD CLASS: 3 (FLAMMABLE LIQUID)
DOT IDENTIFICATION NUMBER: UN1203
DOT PACKING GROUP: II

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15. REGULATORY INFORMATION

SARA 311 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	31=OSHA STEL

The following components of this material are found on the regulatory lists indicated.

BENZENE, ETHYL-
  is found on lists: 01,02,08,10,11,12,13,14,15,17,26,28,
N-BUTANE
  is found on lists: 02,10,11,13,14,28,
CYCLOHEXANE, METHYL
  is found on lists: 02,10,11,13,14,17,26,28,
TOLUENE
  is found on lists: 01,02,05,10,11,12,13,14,17,26,28,29,
N-HEXANE
  is found on lists: 01,02,10,11,12,13,14,17,27,28,
CYCLOHEXANE
  is found on lists: 01,02,10,11,12,13,14,17,26,28,

is found on lists: 01,02,10,11,12,13,14,15,17,
N-HEPTANE
is found on lists: 02,10,11,13,14,15,17,26,28,
2-METHOXY-2-METHYL PROPANE
is found on lists: 01,02,10,11,12,14,24,26,27,30,
BENZENE, TRIMETHYL-
is found on lists: 02,10,11,13,14,26,28,
2,2,4-TRIMETHYLPENTANE
is found on lists: 02,10,11,12,26,
2-ETHOXY-2-METHYL PROPANE
is found on lists: 25,26,
ETHYL ALCOHOL
is found on lists: 02,05,10,11,13,14,17,28,
BENZENE
is found on lists: 01,02,03,04,05,06,10,11,12,13,14,15,17,20,28,31,
2-METHOXY-2-METHYL-BUTANE
is found on lists: 24,25,26,27,30,
GASOLINE (GENERIC)
is found on lists: 04,08,14,15,17,
PENTANES
is found on lists: 14,15,17,
HEXANES
is found on lists: 14,15,

WHMIS CLASSIFICATION:
Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision A: Very Toxic Material
-Carcinogenicity
Class D, Division 2, Subdivision B: Toxic Material
-Skin or Eye Irritation

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16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 3; Reactivity 0;
HMIS RATINGS: Health 1; Flammability 3; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA), or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
This revision updates Section 1 (Product Numbers).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	TPQ	- Threshold Planning Quantity
RQ	- Reportable Quantity	PEL	- Permissible Exposure Limit
C	- Ceiling Limit	CAS	- Chemical Abstract Service Number
A1-5	- Appendix A Categories	()	- Change Has Been Proposed
NDA	- No Data Available	NA	- Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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THIS IS THE LAST PAGE OF THIS MSDS

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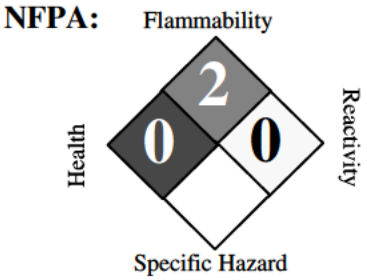
FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Diesel Fuel - NRLM

Material Safety Data Sheet
Diesel Fuel - NRLM



HMIS III:

HEALTH	1
FLAMMABILITY	2
PHYSICAL	0

0 = Ins gn f can , 1 = S gh , 2 = Modera e, 3 = H gh, 4 = Ex reme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diesel Fuel - NRLM

Synonyms : Dakota 50; Diesel Fuel - Non-Road Locomotive and Marine;, 888100005480

MSDS Number : 888100005480 **Version** : 2.13

Product Use Description : Fuel

Company : For: Tesoro Refining & Marketing Co.
300 Concord Plaza Drive, San Antonio, TX 78216-6999

Tesoro Call Center : (877) 783-7676 **Chemtrec (Emergency Contact)** : (800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Regulatory status : This material is considered hazardous by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

Signal Word : WARNING

Hazard Summary : Combustible Liquid

Toxic

Potential Health Effects

Inhalation : Vapors or mists from this material can irritate the nose, throat, and lungs, and can cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.

Eyes : Eye irritation may result from contact with liquid, mists, and/or vapors.

Skin : Skin irritation leading to dermatitis may occur upon prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed. Long-term, repeated skin contact may cause skin cancer.

Ingestion : Harmful or fatal if swallowed. Do NOT induce vomiting. This material can irritate the mouth, throat, stomach, and cause nausea, vomiting, diarrhea and restlessness. Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death.

Target Organs : Kidney, Liver, Central nervous system, Eyes, Skin

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	100%
Naphthalene	91-20-3	1 - 5%
Xylene	1330-20-7	1 - 5%
Nonane	111-84-2	0.75 - 1%
1,2,4-Trimethylbenzene	95-63-6	0.75 - 1%
Sulfur	7704-34-9	500 ppm Max mum

SECTION 4. FIRST AID MEASURES

Inhalation : Move to fresh air. Give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.

Skin contact : Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Wash contaminated clothing before re-use. If skin irritation persists, seek medical attention.

Eye contact : Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.

Ingestion : Do NOT induce vomiting. Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration may cause pulmonary edema and pneumonitis. Seek medical attention immediately.

Notes to physician : Symptoms: Dizziness, Discomfort, Headache, Nausea, Disorder, Vomiting, Lung edema, Aspiration may cause pulmonary edema and pneumonitis. Liver disorders, Kidney disorders.

SECTION 5. FIRE-FIGHTING MEASURES

Form : Liquid

Flash point : 38 ℃ (100 ℉)Minimum for #1 NRLM ; 52° Minimum for #2 NRLM

Lower explosive limit : 0.7 %(V)

Upper explosive limit : 5 %(V)

Suitable extinguishing media : Carbon dioxide (CO2), Water spray, Dry chemical, Foam, Keep containers and surroundings cool with water spray.

Specific hazards during fire fighting : Fire Hazard Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

Further information : Exposure to decomposition products may be a hazard to health. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Consider wind direction; stay upwind and uphill, if possible. Evacuate nonessential personnel and remove or secure all ignition sources. Evaluate the direction of product travel, diking, sewers, etc. to contain spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact. Ensure adequate ventilation. Use personal protective equipment.

Environmental precautions : Carefully contain and stop the source of the spill, if safe to do so. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Take up with sand or oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

CERCLA Hazardous substances and corresponding RQs :

Naph ha ene	91-20-3	100 lbs
Xy ene	1330-20-7	100 lbs
Nonane	111-84-2	100 lbs

SECTION 7. HANDLING AND STORAGE

Handling : Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

Advice on protection against fire and explosion : Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples:

(1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators.

(2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha).

(3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Dust explosion class : Not applicable

Requirements for storage areas and containers : Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Advice on common storage : Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA Z1	Naph ha ene	91-20-3	PEL	10 ppm 50 mg/m3
	Xy ene	1330-20-7	PEL	100 ppm 435 mg/m3
ACGIH	D ese Fue	68476-30-2	TWA	100 mg/m3
ACGIH	Naph ha ene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Xy ene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Nonane	111-84-2	TWA	200 ppm

Engineering measures : Use only intrinsically safe electrical equipment approved for use in classified areas.

Eye protection : Safety glasses with side-shields reference to 29 CFR 1910.133

Hand protection : Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for further information.

Skin and body protection : If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.

Respiratory protection	:	A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. NIOSH/MSHA approved positive-pressure self-contained breathing apparatus (SCBA) or Type C positive-pressure supplied air with escape bottle must be used for gas concentrations above occupational exposure limits, for potential of uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere.
Work / Hygiene practices	:	Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Appearance	:	Clear, straw colored to red if dye added.
Odor	:	Characteristic petroleum (kerosene) odor
Flash point	:	38 °C (100 °F)Minimum for #1 NRLM ; 52° Minimum for #2 NRLM
Thermal decomposition	:	No decomposition if stored and applied as directed.
Lower explosive limit	:	0.7 %(V)
Upper explosive limit	:	5 %(V)
Freezing point	:	Not applicable
Boiling point	:	160 °C(320 °F)
Vapor Pressure	:	< 2 mm Hg at 20 °C
Relative Vapor Density	:	5.7 (Air = 1.0)
Water solubility	:	Negligible
Percent Volatiles	:	100 %
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature		Diesel Fuel Oils at terminal load rack: At least 25 pS/m Ultra Low Sulfur Diesel (ULSD) without conductivity additive: 0 pS/m to 5 pS/m ULSD at terminal load rack with conductivity additive: At least 50 pS/m but conductivity may decrease from environmental factors such as temperature drop. JP-8 at terminal load rack: 150 pS/m to 600 pS/m

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers. Viton ® ; Fluorel ®
Materials to avoid	:	Strong oxidizing agents Peroxides
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and noncombusted hydrocarbons (smoke). Diesel exhaust particulates may be a lung hazard - see Section 11.
Thermal decomposition	:	No decomposition if stored and applied as directed. No decomposition if used as directed.
Hazardous reactions	:	Keep away from oxidizing agents, and acidic or alkaline products.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity

NTP	:	Naphthalene (CAS-No.: 91-20-3)
IARC	:	Naphthalene (CAS-No.: 91-20-3)
OSHA	:	No component of this product which is present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by OSHA.
CA Prop 65	:	WARNING! This product contains a chemical known to the State of California to cause cancer. Naphthalene (CAS-No.: 91-20-3)
Skin irritation	:	Irritating to skin.
Eye irritation	:	Irritating to eyes.
Further information	:	Studies have shown that similar products produce skin cancer or skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. Positive mutagenicity results have been reported. Repeated over-exposure may cause liver and kidney injury IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

Component:

Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	Acu e ora ox c y: LD50 ra Dose: 5,001 mg/kg Acu e derma ox c y: LD50 rabb Dose: 2,001 mg/kg Acu e nha a on ox c y: LC50 ra Dose: 7.64 mg/ Exposure me: 4 h Sk n rr a on: C ass f ca on: Irr a ng o sk n. Resu : Severe sk n rr a on Eye rr a on: C ass f ca on: Irr a ng o eyes. Resu : M d eye rr a on
Naphthalene	91-20-3	Acu e ora ox c y: LD50 ra

		Dose: 2,001 mg/kg Acu e derma ox c y: LD50 ra Dose: 2,501 mg/kg Acu e nha a on ox c y: LC50 ra Dose: 101 mg/ Exposure me: 4 h Sk n rr a on: C ass f ca on: Irr a ng o sk n. Resu : M d sk n rr a on Eye rr a on: C ass f ca on: Irr a ng o eyes. Resu : M d eye rr a on Carc nogen c y: N11.00422130
Xylene	1330-20-7	Acu e ora ox c y: LD50 ra Dose: 2,840 mg/kg Acu e derma ox c y: LD50 rabb Dose: ca. 4,500 mg/kg Acu e nha a on ox c y: LC50 ra Dose: 6,350 mg/ Exposure me: 4 h Sk n rr a on: C ass f ca on: Irr a ng o sk n. Resu : M d sk n rr a on Repea ed or pro onged exposure may cause sk n rr a on and derma s, due o degreas ng proper es of he produc . Eye rr a on: C ass f ca on: Irr a ng o eyes. Resu : M d eye rr a on
Nonane	111-84-2	Acu e ora ox c y: LD50 mouse Dose: 218 mg/kg Acu e nha a on ox c y: LC50 ra Exposure me: 4 h
1,2,4-Trimethylbenzene	95-63-6	Acu e nha a on ox c y: LC50 ra Dose: 18 mg/ Exposure me: 4 h Sk n rr a on: C ass f ca on: Irr a ng o sk n. Resu : Sk n rr a on Eye rr a on: C ass f ca on: Irr a ng o eyes. Resu : Eye rr a on
Sulfur	7704-34-9	Acu e ora ox c y: LD50 ra Dose: 5,001 mg/kg Acu e derma ox c y: LD50 rabb Dose: 2,001 mg/kg Acu e nha a on ox c y: LC50 ra Dose: 9.24 mg/ Exposure me: 4 h Eye rr a on: C ass f ca on: Irr a ng o eyes. Resu : M d eye rr a on

SECTION 12. ECOLOGICAL INFORMATION

Biochemical Oxygen Demand (BOD)	:	No data available

Chemical Oxygen Demand (COD)	:	No data available
Adsorbed organic bound halogens (AOX)	:	Not included
Additional ecological information	:	Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

Component:

Naphthalene	91-20-3	Tox c y o a gae: EC50 Spec es: Dose: 33 mg/ Exposure me: 24 h
1,2,4-Trimethylbenzene	95-63-6	Tox c y o f sh: LC50 Spec es: P mepha es prome as (fa head m nnow) Dose: 7.72 mg/ Exposure me: 96 h Acu e and pro onged ox c y for aqua c nver ebra es: EC50 Spec es: Daphn a Dose: 3.6 mg/ Exposure me: 48 h
Sulfur	7704-34-9	Acu e and pro onged ox c y for aqua c nver ebra es: EC0 Spec es: Daphn a magna (Wa er f ea) Dose: > 10,000 mg/ Exposure me: 24 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : Consult federal, state and local waste regulations to determine appropriate waste characterization of material and allowable disposal methods.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name	: DIESEL FUEL
UN-No.	: 1202 (NA 1993)
Class	: 3
Packing group	: III

TDG

Proper shipping name	: DIESEL FUEL
UN-No.	: UN1202 (NA 1993)
Class	: 3
Packing group	: III

IATA Cargo Transport

UN UN-No.	: UN1202 (NA 1993)
Description of the goods	: DIESEL FUEL
Class	: 3
Packaging group	: III

ICAO-Labels	:	3
Packing instruction (cargo aircraft)	:	310
Packing instruction (cargo aircraft)	:	Y309

IATA Passenger Transport

UN UN-No.	:	UN1202 (NA 1993)
Description of the goods	:	DIESEL FUEL
Class	:	3
Packaging group	:	III
ICAO-Labels	:	3
Packing instruction (passenger aircraft)	:	309
Packing instruction (passenger aircraft)	:	Y309

IMDG-Code

UN-No.	:	UN 1202 (NA 1993)
Description of the goods	:	DIESEL FUEL
Class	:	3
Packaging group	:	III
IMDG-Labels	:	3
EmS Number	:	F-E S-E
Marine pollutant	:	No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid
Toxic by ingestion
Severe skin irritant
Moderate eye irritant
Possible Cancer Hazard

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA III US. EPA Emergency P ann ng and Commun y R gh -To-Know Ac (EPCRA) SARA T e III Sec on 313 Tox c Chem ca s (40 CFR 372.65) - Supp er No f ca on Requ red

Components	CAS-No.
Naphthalene	91-20-3
Xylene	1330-20-7
1,2,4-trimethylbenzene	95-63-6

PENN RTK US. Pennsy van a Worker and Commun y R gh - o-Know Law (34 Pa. Code Chap. 301-323)

Components	CAS-No.
Sulfur	7704-34-9

1,2,4-trimethylbenzene	95-63-6
Nonane	111-84-2
Xylene	1330-20-7
Naphthalene	91-20-3
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6

MASS RTK — US. Massachuse s Commonwea h's R gh - o-Know Law (Append x A o 105 Code of Massachuse s Regu a ons Sec on 670.000)

Components	CAS-No.
Sulfur	7704-34-9
1,2,4-Trimethylbenzene	95-63-6
Nonane	111-84-2
Xylene	1330-20-7
Naphthalene	91-20-3

NJ RTK — US. New Jersey Worker and Commun y R gh - o-Know Ac (New Jersey S a u e Anno a ed Sec on 34:5A-5)

Components	CAS-No.
Sulfur	7704-34-9
1,2,4-Trimethylbenzene	95-63-6
Nonane	111-84-2
Xylene	1330-20-7
Naphthalene	91-20-3
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Revision Date : 05/04/2009

75, 105, 1076

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Diesel Fuel

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Diesel Fuel; SYNONYMS: Diesel Fuel #1 - LS Dyed; Diesel Fuel #2 – DSL2, Off-Road, On-Road, HS–Dyed, LS–Dyed, LS-Undyed, LS Diesel; Winter Blend; Fuel Oil #2 - Diesel Fuel Oil, No. 2 Diesel Fuel Oil, Non-Hwy Dyed; Diesel Fuel – Premium, Super, Supreme, Powerblend, Non-Taxed LS Dyed; Additized; Russian Summer; Arctic; -10 and –35 F pour point depressed diesel; Lago;Burner Oil; Aleyska Turbine Fuel; Distillate - Mid; No. 2; Marine – Marine Gas Oil, MGO, DFM; Navy Fuel; F76; Marine Diesel Fuel (MDO); Intermediate Marine Fuel IF-30 to IF-460; IMF; RR Diesel Fuel - No. 40, No. 35, RR Power Fuel HS Off-Road; CARB Diesel Fuel - On-Road, Off-Road, Tax Exempt Blends, TF3, 10%; EPA - LS Diesel Fuel Dyed, Undyed, Off-Road HS Dyed

GENERAL USE: Fuel

PRODUCT DESCRIPTION: Liquid. Color varies, clear, yellow (pale to straw), red, blue, blue-green color. Petroleum odor.

MANUFACTURER'S NAME Tesoro Petroleum Companies, Inc.		DATE PREPARED: May 23, 2002 SUPERSEDES: New	Page 1 of 5
ADDRESS (NUMBER, STREET, P.O. BOX) 300 Concord Plaza Drive		TELEPHONE NUMBER FOR INFORMATION Tesoro Call Center (877) 783-7676	
(CITY, STATE AND ZIP CODE) San Antonio, TX 78216-6999	COUNTRY USA	EMERGENCY TELEPHONE NUMBER Chemtrec (800) 424-9300	
DISTRIBUTOR'S NAME Same			
ADDRESS (NUMBER, STREET, P.O. BOX)		TELEPHONE NUMBER FOR INFORMATION	
(CITY, STATE AND ZIP CODE)	COUNTRY	EMERGENCY TELEPHONE NUMBER	

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	% (by volume)	OSHA PEL		ACGIH TWA		SARA TITLE III	RQ LBS
			PPM	MG/M^3	PPM	MG/M^3		
Contains or May Contain:								
Diesel Fuel #2	68476-34-6	0 - 100	not established					
Fuel Oil #2	68476-30-2	0 - 100	not established					
Tower Residues, atmospheric	64741-45-3	0 - 100	not established					
Residues (petroleum), Vacuum	64741-56-6	0 - 100	not established					
Heavy catalytically cracked distillate (e,f,g)	64741-61-3	0 - 100		0.2		0.2		
Light thermally cracked distillate (h)	64741-59-9	0 - 100	not established					
Catalytically cracked clarified oil (e,g)	64741-62-4	0 - 100		0.2		0.2		
Xylene (mixed) (a,b,c)	1330-20-7	0 - 1.1	100	435	100		Yes	1000
Trimethylbenzene 1,2,4 (a)	95-63-6	0 - 1.2	25	125			Yes	
Nonane	111-84-2	0 - 1.1	200	1050	200			
Sulfur, precipitated	7704-34-9	0 - 5.0		15				
Naphthalene (a,b,c,d)	91-20-3	0 - 1	10	50	10		Yes	100
Red Dye	not specified	Trace						

(a,c) See Section 15

(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.

(d) Product is listed or defined as a marine pollutant in IMDG Code or 49 CFR 172.101 Appendix B, List of Marine Pollutants and must be classified as an Environmentally Hazardous Substance, Class 9, in addition to any other defined hazards for this product.

(e) California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986, chemicals known to the state to cause cancer or reproductive toxicity. A person in the course of doing business must warn others who may consume, come into contact with, or otherwise be exposed to this chemical.

(f) IARC has determined that residual fuels are poss bly carcinogenic to humans. Handling procedures and safety precautions in the MSDS should be followed to minimize employee's exposure.

(g) IARC has determined there is sufficient evidence for the carcinogenicity of catalytically cracked oils.

(h) Kidney damage may result following aspiration pneumonitis. The results of animal bioassays on middle distillate fuels show that prolonged dermal contact produces a weak to moderate carcinogenic activity.

MATERIAL SAFETY DATA SHEET

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May 23, 2002

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Various colored liquid, potentially hazardous vapors. Flammable as defined by DOT and TDG. May be classified by DOT as Combustible. Classified as Combustible by OSHA. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard symbols for this product - F, XI Risk Phrases - R10 20 36 38

POTENTIAL HEALTH EFFECTS

INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate irritation or dermatitis.

EYES: High vapor concentration or contact may cause irritation and discomfort.

INGESTION: May result in vomiting; aspiration of vomitus into the lungs must be avoided; DO NOT induce vomiting. Minute amounts aspirated into the lungs can produce severe lung injury, chemical pneumonitis, pulmonary edema or death.

CARCINOGENICITY NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

This product contains a mixture of petroleum hydrocarbons called middle distillates. Because of this broad description, many products are considered middle distillates yet they are produced by a variety of different petroleum refining processes. Toxicology data developed on some middle distillates found that they caused positive responses in some mutagenicity tests and caused skin cancer when repeatedly applied to mice over their lifetime.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

INGESTION: DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs; seek immediate medical attention. Vomiting may be induced only under the supervision of a physician.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL: 0.3%	UEL: 10.0%
100 - 199° F (38 - 93° C) TCC	AUTOIGNITION TEMPERATURE:	350 - 625°F	NFPA CLASS: II

GENERAL HAZARDS: Product is considered combustible. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA

Carbon dioxide, water fog, dry chemical, chemical foam

FIRE FIGHTING PROCEDURES

Firefighters must wear full facepiece self - contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire - exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material is combustible!

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes, oxides of carbon

MATERIAL SAFETY DATA SHEET

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May 23, 2002

SECTION 6 - ENVIRONMENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: COMBUSTIBLE. Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements. Do not discharge into lakes, ponds, streams or public waters.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: This material is combustible. It should be stored in tightly closed containers in a cool, well ventilated area. Vapor may form explosive mixtures in air. All sources of ignition should be controlled. This material may be classified as COMBUSTIBLE by DOT unless transported by vessel or aircraft. Refer to 49 CFR 173.120. Keep this and other chemicals out of reach of children. Avoid inhaling concentrated fumes or vapors.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment. See Section 2 for Component Exposure Guidelines.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): None required while threshold limits (Section 2) are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.

EYE PROTECTION: Protective eyeglasses or chemical safety goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyebath nearby

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE (PSIA) < 0.5 PSIA @ 100º F	VAPOR DENSITY (AIR = 1) > 1
SPECIFIC GRAVITY @ 60º F (WATER = 1) 0.78 - 0.955	EVAPORATION RATE (WATER = 1) < 1
SOLUBILITY IN WATER Negligible, below 1.0%	FREEZING POINT - 51º F (- 46º C)
pH Not determined	APPEARANCE AND ODOR Liquid,.clear, yellow (pale to straw), red, blue, blue-green, petroleum odor.
BOILING RANGE 30 - 806° F (1.1 - 430° C)	PHYSICAL STATE Liquid
VISCOSITY 1.7 - 40.0 cS @ 100°F	VOLATILE ORGANIC COMPOUNDS (Total VOC's) 6.75 lbs / gallon

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: XXX	CONDITIONS TO AVOID: Extreme temperatures, open flames

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.

HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: XXX	CONDITIONS TO AVOID: None

MATERIAL SAFETY DATA SHEET

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Ingredients (All products may not be listed if information is not available)	%	CAS #	LD50 of Ingredient (Species and Route)	LC50 of Ingredient (Species)
Contains or May Contain:				
Diesel Fuel #2	0 - 100	68476-34-6	Not established	Not established
Fuel Oil #2	0 - 100	68476-30-2	Not determined	Not determined
Tower Residues, atmospheric	0 - 100	64741-45-3	Not established	Not established
Residues (petroleum), Vacuum	0 - 100	64741-56-6	Not established	Not established
Heavy catalytically cracked distillate (e,f,g)	0 - 100	64741-61-3	Not established	Not established
Light thermally cracked distillate (h)	0 - 100	64741-59-9	Not established	Not established
Catalytically cracked clarified oil (e,g)	0 - 100	64741-62-4	Not established	Not established
Xylene (mixed) (a,b,c)	0 - 1.1	1330-20-7	4300 mg / kg Oral - rat	5000 ppm / 4H Inhalation - rat
Trimethylbenzene 1,2,4 (a)	0 - 1.2	95-63-6	5 gm / kg Oral - mouse	18 gm / m3 / 4H Inhalation - rat
Nonane	0 - 1.1	111-84-2	218 mg / kg Oral - mouse	3200 ppm / 4H Inhalation - rat
Sulfur, precipitated	0 - 5.0	7704-34-9	Not available	Not available
Naphthalene (a,b,c,d)	0 - 1	91-20-3	1780 mg / kg Oral - rat	Not established
Red Dye	Trace	not specified	Not determined	Not determined

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802. Naphthalene (91-20-3) one of the ingredients in this mixture is classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce hazardous vapors or fumes in a closed disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Diesel Fuel

DOT HAZARD CLASS / Pack Group: 3 / III
REFERENCE: 49 CFR 173.150, .203, .242
UN / NA IDENTIFICATION NUMBER: NA 1993
LABEL: Flammable
HAZARD SYMBOLS: F

IATA HAZARD CLASS / Pack Group: Not applicable
IMDG HAZARD CLASS: Not applicable
RID/ADR Dangerous Goods Code: Not applicable
UN TDG Class / Pack Group: Not applicable

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

MATERIAL SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic substance Control Act)

Components of this product are listed on the TSCA Inventory.

SARA TITLE III (Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories

Acute health, flammable

313 Reportable Ingredients:

(a) A "Yes" in the SARA TITLE III column in Section 2 indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CERCLA (Comprehensive Response Compensation and Liability Act)

(c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24,000 lbs) or greater amounts, according to 40 CFR 302.

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number are listed on the Canadian Ingredient Disclosure List are shown in Section 2.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL and may or may not be listed in Section 2 of this document. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

EC Risk Phrases

R10 Flammable
R20 Harmful by inhalation
R36 Irritating to eyes
R38 Irritating to skin.
R51 Toxic to aquatic organisms.
R65 Damaging to lungs when swallowed

EC Safety Phrases

S16 Keep away from sources of ignition
S23 Do not breathe vapor
S25 Avoid contact with eyes
S28 After contact with skin, wash immediately with plenty of soap and water.
S29 Do not empty into drains
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this label.

SECTION 16 - OTHER INFORMATION

Values do not reflect absolute minimums and maximums; these values are typical which may vary from time to time.

HMIS HAZARD RATINGS				
	HEALTH	1	0 = INSIGNIFICANT	3 = HIGH
	FLAMMABILITY	2	1 = SLIGHT	4 = EXTREME
	REACTIVITY	0	2 = MODERATE	
	PERSONAL PROTECTIVE EQUIPMENT	B	Safety Glasses, Gloves	

REVISION SUMMARY:

This MSDS has been revised in the following sections: No revisions available

MSDS Prepared by: Chem-Tel, Inc.
1305 N. Florida Ave.
Tampa, Florida USA 33602
(800) 255-3924 Outside USA (813) 248-0573

DISCLAIMER: The information supplied in this data sheet is obtained from currently available sources, which are believed to be reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THE INFORMATION OR THE RESULTS TO BE OBTAINED FROM ITS USE.

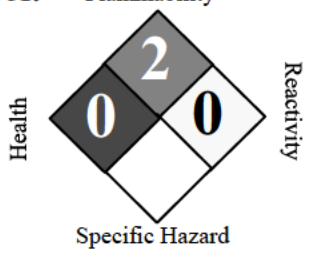
Handling, storage, use or disposal of the above-referenced product is beyond our control and may occur under conditions with which we are unfamiliar. FOR THESE AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM ANY LIABILITY FOR DAMAGE, INJURY AND COST ARISING FROM OR RELATED TO THE USE OF THE PRODUCT.

FIGURE C.8-3 - MATERIAL SAFETY DATA SHEETS (MSDS), CONTINUED

Click to view/print Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)

Material Safety Data Sheet
Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)

NFPA:



TESORO

HMIS III:

HEALTH	1
FLAMMABILITY	2
PHYSICAL	0

0 = Insignificant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)		
Synonyms	:	888100004478		
MSDS Number	:	888100004478	**Version** :	2.9
Product Use Description	:	Fuel		
Company	:	For: Tesoro Refining & Marketing Co. 300 Concord Plaza Drive, San Antonio, TX 78216-6999		
Tesoro Call Center	:	(877) 783-7676	**Chemtrec (Emergency Contact)** :	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Regulatory status : This material is considered hazardous by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

Signal Word : WARNING

Hazard Summary : Toxic. Combustible Liquid

Potential Health Effects

Eyes : Eye irritation may result from contact with liquid, mists, and/or vapors.

Inhalation : Vapors or mists from this material can irritate the nose, throat, and lungs, and can cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.

Skin : Skin irritation leading to dermatitis may occur upon prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed. Long-term, repeated skin contact may cause skin cancer

Ingestion : Harmful or fatal if swallowed. Do NOT induce vomiting. This material can irritate the mouth, throat, stomach, and cause nausea, vomiting, diarrhea and restlessness Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death.

Target Organs : Central nervous system, Eyes, Skin, Kidney, Liver

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	100%
Nonane	111-84-2	0 - 5%
Naphthalene	91-20-3	0 - 1%
1,2,4-Trimethylbenzene	95-63-6	0 - 2%
Xylene	1330-20-7	0 - 2%
Sulfur	7704-34-9	15 ppm maximum

SECTION 4. FIRST AID MEASURES

Inhalation : Move to fresh air. Give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.

Skin contact : Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Wash contaminated clothing before re-use. If skin irritation persists, seek medical attention immediately.

Eye contact : Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes. If symptoms persist, seek medical attention.

Ingestion : Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Seek medical attention immediately.

Notes to physician : Symptoms: Dizziness, Discomfort, Headache, Nausea, Disorder, Vomiting, Lung edema, Aspiration may cause pulmonary edema and pneumonitis, Liver disorders, Kidney disorders.

SECTION 5. FIRE-FIGHTING MEASURES

Form : Liquid

Flash point : 38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel

Auto Ignition temperature : 257 °C (495 °F)

Lower explosive limit : 0.6 %(V)

Upper explosive limit : 4.7 %(V)

Suitable extinguishing media : Carbon dioxide (CO2), Water spray, Dry chemical, Foam, Keep containers and surroundings cool with water spray.

Specific hazards during fire fighting : Fire Hazard Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.

Special protective equipment : Wear self-contained breathing apparatus and protective suit. Use personal

for fire-fighters		protective equipment.
Further information	:	Exposure to decomposition products may be a hazard to health. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to contain spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact. Ensure adequate ventilation. Use personal protective equipment.
Environmental precautions	:	Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	:	Take up with sand or oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

CERCLA Hazardous substances and corresponding RQs :

Xylene	1330-20-7	100 lbs
Naphthalene	91-20-3	100 lbs
Nonane	111-84-2	100 lbs

SECTION 7. HANDLING AND STORAGE

Handling	:	Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.
Advice on protection against fire and explosion	:	Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to

avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha).

(3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Dust explosion class : Not applicable

Requirements for storage areas and containers : Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Other data : Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Advice on common storage Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
ACGIH	Diesel Fuel	68476-30-2	TWA	100 mg/m3
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Nonane	111-84-2	TWA	200 ppm

Engineering measures : Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.

Eye protection : Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Hand protection : Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for further information.

Skin and body protection	:	If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.
Respiratory protection	:	A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.
Work / Hygiene practices	:	Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Appearance	:	Clear, straw colored
Odor	:	Characteristic petroleum (kerosene) odor
Flash point - typical	:	38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel
Auto Ignition temperature	:	257 °C (495 °F)
Thermal decomposition	:	No decomposition if stored and applied as directed.
Lower explosive limit	:	0.6 %(V)
Upper explosive limit	:	4.7 %(V)
pH	:	Not applicable
Freezing point	:	No data available
Boiling point	:	148 - 372 °C(298 - 702 °F)
Vapor Pressure	:	< 2 mm Hg at 20 °C
Density	:	**0.86** g/cm3
Water solubility	:	Negligible
Viscosity, dynamic	:	1.7 - 40 mPa.s at 37.8 °C (100.0 °F)

Percent Volatiles	:	100 %
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature		Diesel Fuel Oils at terminal load rack: At least 25 pS/m Ultra Low Sulfur Diesel (ULSD) without conductivity additive: 0 pS/m to 5 pS/m ULSD at terminal load rack with conductivity additive: At least 50 pS/m but conductivity may decrease from environmental factors such as temperature drop. JP-8 at terminal load rack: 150 pS/m to 600 pS/m

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers. Viton ® ; Fluorel ®
Materials to avoid	:	Strong oxidizing agents. Peroxides
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and noncombusted hydrocarbons (smoke). Diesel exhaust particulates may be a lung hazard - see Section 11.
Thermal decomposition	:	No decomposition if stored and applied as directed.
Hazardous reactions	:	Keep away from oxidizing agents, and acidic or alkaline products.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity

NTP	:	Naphthalene (CAS-No.: 91-20-3)
IARC	:	Naphthalene (CAS-No.: 91-20-3)
OSHA	:	No component of this product which is present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by OSHA.
CA Prop 65	:	WARNING! This product contains a chemical known to the State of California to cause cancer. naphthalene (CAS-No.: 91-20-3)
Skin irritation	:	Irritating to skin.
Eye irritation	:	Irritating to eyes.
Further information	:	Studies have shown that similar products produce skin cancer or skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. Positive mutagenicity results have been reported. Repeated over-exposure may cause liver and kidney injury IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

Component:

Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	Acute oral toxicity LD50 rat Dose: 5,001 mg/kg Acute dermal toxicity LD50 rabbit

		Dose: 2,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 7.64 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Severe skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Nonane	111-84-2	Acute oral toxicity: LD50 mouse Dose: 218 mg/kg Acute inhalation toxicity: LC50 rat Exposure time: 4 h
Naphthalene	91-20-3	Acute oral toxicity: LD50 rat Dose: 2,001 mg/kg Acute dermal toxicity: LD50 rat Dose: 2,501 mg/kg Acute inhalation toxicity: LC50 rat Dose: 101 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation Carcinogenicity: N11.00422130
1,2,4-Trimethylbenzene	95-63-6	Acute inhalation toxicity: LC50 rat Dose: 18 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Skin irritation Eye irritation: Classification: Irritating to eyes. Result: Eye irritation
Xylene	1330-20-7	Acute oral toxicity: LD50 rat Dose: 2,840 mg/kg Acute dermal toxicity: LD50 rabbit Dose: ca. 4,500 mg/kg Acute inhalation toxicity: LC50 rat Dose: 6,350 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as

information applicable, under Federal and State regulations.

Component:

Naphthalene	91-20-3	Toxicity to algae: EC50 Species: Dose: 33 mg/l Exposure time: 24 h
1,2,4-Trimethylbenzene	95-63-6	Toxicity to fish: LC50 Species: Pimephales promelas (fathead minnow) Dose: 7.72 mg/l Exposure time: 96 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia Dose: 3.6 mg/l Exposure time: 48 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name	: DIESEL FUEL
UN-No.	: UN1202 (NA 1993)
Class	: 3
Packing group	: III

TDG

Proper shipping name	: DIESEL FUEL
UN-No.	: UN1202 (NA 1993)
Class	: 3
Packing group	: III

IATA Cargo Transport

UN UN-No.	: UN1202 (NA 1993)
Description of the goods	: DIESEL FUEL
Class	: 3
Packaging group	: III
ICAO-Labels	: 3
Packing instruction (cargo aircraft)	: 310
Packing instruction (cargo aircraft)	: Y309

IATA Passenger Transport

UN UN-No.	: UN1202 (NA 1993)
Description of the goods	: DIESEL FUEL
Class	: 3
Packaging group	: III

	ICAO-Labels	: 3
	Packing instruction (passenger aircraft)	: 309
	Packing instruction (passenger aircraft)	: Y309

IMDG-Code

UN-No.	: UN 1202 (NA 1993)
Description of the goods	: DIESEL FUEL
Class	: 3
Packaging group	: III
IMDG-Labels	: 3
EmS Number	: F-E S-E
Marine pollutant	: No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid
Moderate skin irritant
Moderate eye irritant
Toxic by ingestion
POSSIBLE CANCER HAZARD

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA III — US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

Components	CAS-No.
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Naphthalene	91-20-3

PENN RTK — US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Components	CAS-No.
Nonane	111-84-2
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
xylene	1330-20-7
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6

MASS RTK — US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Components	CAS-No.

Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Naphthalene	91-20-3
Nonane	111-84-2

NJ RTK — US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Components	CAS-No.
Nonane	111-84-2
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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10/17/2008

65, 66, 295

APPENDIX D
CROSS-REFERENCES

Last Revised: 09/01/2008

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Figure D-1 - DOT / PHMSA Cross-Reference

Figure D-2 - OSHA Cross-Reference

Figure D-3 - WDOE Cross-Reference

Figure D-4 - WSDA Cross-Reference

Figure D-5 - OR DEQ Cross-Reference

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Information Summary	
• For the core plan:	Section 1.2
• Name and address of operator	Figure 1-2
• For each Response Zone which contains one or more line sections that meet the criteria for determining significant and substantial harm (§194.103), listing and description of Response Zones, including county(s) and state(s)	Figure 1-2
• For each Response Zone appendix:	Section 1.2
• Information summary for core plan	Section 1
• QI names and telephone numbers, available on 24-hr basis	Figure 1-2
• Description of Response Zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment	Figure 1-2
• List of line sections contained in Response Zone, identified by milepost or survey station or other operator designation	Figure 1-2
• Basis for operator's determination of significant and substantial harm	Figure 1-2
• The type of oil and volume of the worst case discharge	Figure 1-2
• 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
Notification Procedures	
• Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable state or local requirements	Figure 3.1-3, Figure 3.1-4
• Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority	Figure 3.1-3, Figure 3.1-4
• Name of persons (individuals or organizations) to be notified of discharge, indicating whether notification is to be performed by operating personnel or other personnel	Figure 3.1-1, Figure 3.1-3, Figure 3.1-4
• Procedures for notifying Qualified Individuals	Figure 3.1-1, Figure 2-1, Section 4.2
• Primary and secondary communication methods by which notifications can be made	Section 7.1.6

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Notification Procedures, Continued	

• Information to be provided in the initial and each follow-up notification, including the following:
  • Name of pipeline
  • Time of discharge
  • Location of discharge
  • Name of oil recovered
  • Reason for discharge (e.g. material failure, excavation damage, corrosion)
  • Estimated volume of oil discharged
  • Weather conditions on scene
  • Actions taken or planned by persons on scene
	Figure 3.1-2

Spill Detection and On-Scene Spill Mitigation Procedures	
• Methods of initial discharge detection	Appendix C.3
• Procedures, listed in order of priority, that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline	Section 2

• List of equipment that may be needed in response activities based on land and navigable waters including:
  • Transfer hoses and pumps
  • Portable pumps and ancillary equipment
  • Facilities available to transport and receive oil from a leaking pipeline
	Section 7.1.1, Figure 7.1-1, Appendix B

• Identification of the availability, location, and contact phone numbers to obtain equipment for response activities on a 24-hour basis	Figure 3.1-4, Appendix B
• Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in response activities on a 24-hour basis	Figure 3.1-3, Section 7.1.1, Appendix B
Response Activities	
• Responsibilities of, and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the Qualified Individual or other response resources identified in the response plan	Section 2, Section 4
• Qualified Individual's responsibilities and authority, including notification of the response resources identified in the response plan	Section 4.5
• Procedures for coordinating the actions of the operator or Qualified Individual with the action of the OSC responsible for monitoring or directing those actions	Section 4.4, Section 4.5, Section 4.6
• Oil spill response organizations (OSRO) available through contract or other approved means, to respond to a worst case discharge to the maximum extent practicable	Appendix B

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Response Activities, Continued	

• For each organization identified under paragraph (d), a listing of:
  • Equipment and supplies available
  • Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first seven days of the response
	Appendix B

List of Contacts	
• List of persons the Plan requires the operator to contact	Figure 3.1-1
• Qualified individuals for the operator's areas of operation	Figure 1-2, Figure 3.1-3
• Applicable insurance representatives or surveyors for the operator's areas of operation	Figure 3.1-3
• Persons or organizations to notify for activation of response resources	Figure 3.1-1, Figure 3.1-3
Training Procedures	
• Description of training procedures and programs of the operations	Appendix A.2
Drill Procedures	
• Announced and unannounced drills	Figure A.1-2

• Types of drills and their frequencies; for example:
  • Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly
  • Drills involving emergency actions by assigned operating or maintenance personnel and notification of qualified individual on pipeline facilities which are normally unmanned, conducted quarterly
  • Shore-based spill management team (SMT) tabletop drills conducted yearly
  • Oil spill removal organization field equipment deployment drills conducted yearly
  • A drill that exercises entire response plan for each Response Zone, would be conducted at least once every three years
	Figure A.1-2

Response Plan review and update procedures	
• Procedures to meet §194.121	Section 1.2
• Procedures to review plan after a worst case discharge and to evaluate and record the plan's effectiveness	Section 1.2
Response zone appendices	
Each response zone appendix would provide the following information:	Section 1.2
• Name and telephone number of the qualified individual	Figure 1-2
• Notification procedures	Section 3.1
• Spill detection and mitigation procedures	Section 2.1.1, Appendix C.3

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Response zone appendices, Continued	
• Name, address, and telephone number of oil spill response organization	Figure 3.1-4, Appendix B

• Response activities and response resources including:
  • Equipment and supplies necessary to meet §194.115
  • Trained personnel necessary to sustain operation of the equipment and to staff the oil spill response organization and spill management team for the first seven days of the response
	Figure 4.6-3, Section 7.1.1, Figure 7.1-1, Appendix A, Appendix B

• Names and telephone numbers of federal, state, and local agencies which the operator expects to assume pollution response responsibilities	Figure 3.1-4
• Worst case discharge volume	Appendix C.7.1
• Method used to determine the worst case discharge volume, with calculations	Appendix C.7.1

• A map that clearly shows:
  • Location of worst case discharge
  • Distance between each line section in the Response Zone:
  • Each potentially affected public drinking water intake, lake, river, and stream within a radius of five miles of the line section
  • Each potentially affected environmentally sensitive area within a radius of one mile of the line section
	Figure 1-4, Section 6.8

• Piping diagram and plan-profile drawing of each line section; may be kept separate from the response plan if the location is identified	Figure 1-2

• For every oil transported by each pipeline in the response zone, emergency response data that:
  • Include name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods
  • Meet 29 CFR 1910.1200 or 49 CFR 172.602
	Appendix C.8

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
National Contingency Plan and Area Contingency Plan Certifications (49 CFR 194.107(b))	
1.A. Has the operator reviewed the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP)?	Section 1.1
1.B. Does the Facility Response Plan follow the Area Contingency Plans?	Section 1.1
1.C. Please list the names of the Area Contingency Plans and the pages in the Facility Response Plan that relate to the Area Contingency Plans.Section 1.2	Section 1.1, Entire Plan
Plan Information Summary (49 CFR 194.107(c)(1), (c)(1)(i) and (c)(2) and 49 CFR 194.113)	
2. Does the Plan Information Summary contain the following?	Section 1.2
• The Operator Name, Street Address, City, State, and Zip Code.	Figure 1-2
• A list of response zones that meet the criteria for significant and substantial harmSection 1.2 (49 CFR 194.113(a)(2)) and a list of response zones in which a worst-case discharge could cause substantial harm.	Figure 1-2
• The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worse case discharge in the response zone can be expected to cause significant and substantial harm for each response zone.	Figure 1-2
• Description of each response zone, including the county(s) and State(s).	Figure 1-2
• Explanation for each response zone designation.	Figure 1-2
• Name(s), title(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone.	Figure 1-2, Figure 3.1-3
• Name(s), title(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone.	Figure 1-2, Figure 3.1-3
• List of line sections in each response zone by milepost, survey station number, or other operator designation.	Figure 1-2
• If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.	Figure 1-2
• The type of oil and the volume of the worst-case discharge in each response zone.	Figure 1-2
Notifications	
3.1. What person, position, or facility is responsible for starting immediate notification? (49 CFR 194.107(c)(1)(ii))Section 1.2 Please list the person's, position's, or facility's mailing and electronic mail addresses and office, fax, and cellular telephone information.	Figure 1-2
3.2. Is the person, position, or facility capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(c)(1)(ii)) Please describe your immediate notification plan.	Section 3.1
3.3. Do the Facility Response Plan notification procedures include telephone numbers so that the qualified individual(s) and oil spill removal organization(s) can be reached twenty-four hours a day, three hundred sixty-five days a year?Section 1.2 (49 CFR 194.107(b)(1) and (2), 194.107(c)(1)(ii) and 194.113(b)(2))	Figure 3.1-3, Figure 3.1-4

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Notifications, Continued	
• Qualified Individual(s)?	Figure 3.1-3
• Oil Spill Removal Organization(s)?	Figure 3.1-4
• Are the National Response Center numbers correctly listed as 1-800-424-8802 and 202-267-2675 in the plan?	Figure 3.1-4
• Company personnel?	Figure 3.1-3
3.4. Does the notification section include the following information?Section 1.2 (49 CFR 194.107(b)(1) and (2), and 194.107(c)(1)(ii))	Section 1.2
• Name of pipeline operator?	Figure 3.1-2
• Time of discharge?	Figure 3.1-2
• Location of discharge?	Figure 3.1-2
• Name of oil involved?	Figure 3.1-2
• Reason for discharge?	Figure 3.1-2
• Estimated volume of oil discharged?	Figure 3.1-2
• Weather conditions on scene?	Figure 3.1-2
3.5. Does the Facility Response Plan name and give the address(es) and telephone number(s)Section 1.2 for the operator's oil spill removal organization(s)?Section 1.2 (49 CFR 194.107(c)(1)(iv) and 194.115)	Figure 3.1-4, Appendix B
• Name(s)?	Figure 3.1-4, Appendix B.1.1
• Address(es)?	Appendix B.1.1
• Telephone Number(s)?	Figure 3.1-4
Spill Detection and Mitigation Procedures	
4.1. Does the Facility Response Plan contain procedures to name and mitigate or prevent a substantial threat of a worst-case discharge? (49 CFR 194.107(a) and (b)(2)(i))	Section 2.1.1
4.2. Does the Facility Response Plan name personnel, equipment, and procedures for detecting leaks and spills and locating spills throughout the response zone? (49 CFR 194.107(c)(1)(iii))	Figure 3.1-3, Section 7.1.1, Figure 7.1-1, Appendix B, Appendix C.3
4.3. Does the Facility Response Plan name the maximum time to detect the spill and shut down flow in affected pipeline(s) in bad weather? (49 CFR 194.105(b)(1))	Appendix C.7.1
4.4. Does the Facility Response Plan have procedures to mitigate spills appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(2)(i), and (c)(1)(iii) and (v))	Section 2.1

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Spill Containment	
5.1. Does the Facility Response Plan name spill containment strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), and (c)(1)(v))	Section 6.2, Section 7.3
5.2. Can planned spill containment activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Appendix C.5, Appendix C.7.1
5.3. Are containment equipment capacities described in sufficient detail and does the Facility Response Plan identify enough spill containment equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.1.1, Figure 7.1-1, Appendix B
Spill Recovery	
6.1. Does the Facility Response Plan identify the spill recovery strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (iv), and (c)(1)(v))	Section 2.1, Section 6.2, Appendix C.5
6.2. Can planned spill recovery activities be accomplished within the appropriate tier times?(49 CFR 194.107(b)(2)(i) and(c)(1)(v), and 194.115)	Appendix C.5, Appendix C.7.1
6.3. Are recovery equipment capacities described in sufficient detail and does the Facility Response Plan identify sufficient spill recovery equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.1.1, Figure 7.1-1, Appendix B
Disposal	
7.1. Does the Facility Response Plan identify disposal procedures, including temporary storage equipment for recovered oil appropriate for the response zone and consistent with applicable Area Contingency Plans?Section 1.2 (49 CFR 194.107(b)(1)(iii), (b)(2)(i), and (c)(1)(v))	Section 7.3, Section 7.1.1, Figure 7.1-1, Appendix B
7.2. Can planned temporary storage and waste disposal activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.3, Appendix C.7.1
7.3. Does the Facility Response Plan identify sufficient temporary storage capabilities to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.3, Section 7.1.1, Figure 7.1-1, Appendix B
Sensitive Area Protection	
8.1. Does the Facility Response Plan identify the protection strategies appropriate for the response zone and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (ii), and (c)(1)(v))	Section 6
8.2. Can planned protection activities be accomplished within the appropriate tier times?(49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 6, Appendix C.5

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Management	
9.1. Is the response management system described in the Facility Response Plan based on an Incident Command System?Section 1.2 (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	Section 4
9.2. Does the operator's response organization describe roles and responsibilities for (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	Section 1.2
• Qualified Individual?	Section 4.5
• Other operator response personnel including the spill management team?	Section 4.5, Section 4.6
• Contracted Oil Spill Removal Organization(s)?	Section 7.1.3, Figure A.1-2
9.3. Does the operator's response organization describe how the operator works with the Unified Command and with responders including (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	Section 4.4
• Oil Spill Removal Organization(s)?	Section 4.4, Section 4.5, Section 4.6
• State and Local Responders?	Section 4.4
• Federal On-Scene Coordinator?	Section 4.4
Communications, Response Equipment and Transportation	
10.1. Does the Facility Response Plan describe appropriate communications procedures and system(s) adequate for notifications and response operations? (49 CFR 194.107(c)(1)(ii) and (v))	Section 7.1.6
10.2. Does the Facility Response Plan identify response equipment that the operator owns and maintains?Section 1.2 (49 CFR 194.107(c)(1)(v) and 194.115(a))	Section 7.1.1
10.3. Does the Facility Response Plan describe procedures for maintaining response equipment the operator owns? (49 CFR 194.107(c)(1)(viii))	Section 7.1.2
10.4. Does the Facility Response Plan identify Oil Spill Removal Organization(s)' response equipmentSection 1.2 that the U.S. Coast Guard has not classified? (49 CFR 194.107(c)(1)(v) and 194.115(a))	Figure 7.1-1, Appendix B
10.5. Does the Facility Response Plan describe procedures for maintaining Oil Spill Removal Organization(s)' response equipment that the U.S. Coast Guard has not classified? (49 CFR 194.107(c)(1)(viii))	Section 7.1.3, Figure A.1-2
10.6. Does the Facility Response Plan identify location(s) for operator-owned and Oil Spill Removal Organization-owned response equipment? (49 CFR 194.115(b))	Section 7.1.1, Figure 7.1-1, Appendix B
10.7. Does the Facility Response Plan describe mobilizing and deploying response equipment within the appropriate tier times consistent with the plan's response activities? (49 CFR 194.107(c)(1)(v) and 194.115(b))	Appendix C.5
10.8. Does the size of the response zone permit planned response activities, including equipment mobilization and deployment, within the appropriate tier times?Section 1.2 (49 CFR 194.115(b))	Appendix C.5

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Personnel and Mobilization	
11.1. Does the Facility Response Plan identify enough trained personnel to respond to the worse case discharge consistent with the Plan's response activities? (49 CFR 194.107(a), (c)(1)(v), and (c)(3), 194.115, and 194.117)	Figure 3.1-3, Figure 4.6-3
11.2. Does the Facility Response Plan describe procedures for mobilizing and deploying response personnel throughout the response zone(s) consistent with the Plan's response activities?Section 1.2 (49 CFRSection 1.2 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 2, Section 3, Section 4.2
Response Documentation and Worst Case Discharge	
12.1. Does the operator describe procedures the response management organization must use to document response decisions, activities, and costs? (49 CFR 194.107(c)(3))	Section 3, Section 5, Appendix C.5
12.2. Does the Facility Response Plan provide the calculations and methodology used for determining the worst-case discharge for the response zone(s)?Section 1.2 (49 CFR 194.105)	Appendix C.7.1
12.3. Is the worst-case discharge volume calculated using the three specified methods in the Department of Transportation regulation? Are the calculations accurate and as prescribed?(49 CFR 194.105(b))	Appendix C.7.1
Training: Program and Procedures	
13.1. Does the Facility Response Plan describe a training program that teaches response personnel about the Plan and their responsibilities under the Plan? (49 CFR 194.107(b)(1)(ii), (c)(1)(vii) and (c)(3), and 194.117)	Appendix A.2
13.2. Does the Facility Response Plan describe a training program that teaches response personnelSection 1.2 about matters including (49 CFR 194.117(a)(3))	Appendix A.2
• Oil characteristics and hazards?	Appendix A.2
• Conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures and appropriate corrective actions?	Appendix A.2
• Steps necessary to control an accidental discharge of oil?	Appendix A.2
• Steps necessary to minimize the potential for fire, explosion, or environmental damage?	Appendix A.2
• Proper fire-fighting procedures and use of personal protective equipment?	Appendix A.2
13.3. Does the Facility Response Plan describe a response-training program that addresses the appropriate levels of training and the requirements in OSHA 29 CFR 1910.120? (49 CFR 194.107(b)(1)(ii) and 194.117(c))	Appendix A.2
13.4. Does the Facility Response Plan describe the operator's procedures for maintaining records for response personnel?Section 1.2 (49 CFR 194.117(b))	Appendix A.2

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Personnel and Mobilization	
14.1. Does the Facility Response Plan describe procedures for conducting internal and external drills that includeSection 1.2 (49 CFR 194.107(c)(1)(ix))	Appendix A.1
• Responsibility for planning, carrying out, and monitoring drills?	Appendix A.1
• Announced drills?	Appendix A.1
• At least one unannounced internal drill?	Appendix A.1
• Quarterly Qualified Individual notifications drills?	Appendix A.1
• Annual spill management team tabletop drills?	Appendix A.1
• Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan?	Appendix A.1
• At least one drill that tests the entire response plan for each response zone at least once every three years?	Appendix A.1
14.2. Does the Facility Response Plan describe a three-year drill and exercise cycle and the frequencies for each type of drill in that cycle?Section 1.2Section 1.2 (49 CFR 194.107(c)(1)(ix))	Appendix A.1
14.3. Does the Facility Response Plan describe procedures for maintaining drill documentation for three years?Section 1.2 (49 CFR 194.107(c)(1)(ix))	Appendix A.1
Response Plan Maintenance	
15.1. Does the Facility Response Plan describe the requirements and procedures for the operator to: (49 CFR 194.107(c)(1)(x) and 194.121(a))	Section 1.2
a. Review the Facility Response Plans at least once every five years from the date the Office of Pipeline Safety approves the plan,	Section 1.2
b. Modify the Facility Response Plan to address new or different operating conditions or information in the Facility Response Plan, and	Section 1.2
c. Submit the plan for the Office of Pipeline Safety to review, require changes, and approve?	Section 1.2
15.2. Does the Facility Response Plan identify key factors that may cause revisions to the response plan and require the operator to submit revisions to the Office of Pipeline Safety within 30 days of making the revisions for factors including: (49 CFR 194.121(b))	Section 1.2
• New pipeline construction or purchase?	Section 1.2
• Different worst-case discharge volume?	Section 1.2
• Change in commodities transported?	Section 1.2
• Change in Oil Spill Removal Organization(s)?	Section 1.2
• Change in Qualified Individual(s)?	Section 1.2
• Change in a National Contingency Plan or Area Contingency Plan that has a significant impact on the appropriateness of response equipment or response strategies?	Section 1.2
• Change in response procedures?	Section 1.2

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Plan Maintenance, Continued	
15.3. Does the Facility Response Plan describe procedures for incorporating improvements in the following?Section 1.2 (49 CFR 194.121(b)(8))	Section 1.2
• Post-drill evaluation results?	Section 8.3
• Post-incident evaluation results?	Section 8.3
National Contingency Plan and Area Contingency Plan Consistency and Concept of Operations	
16.1. Is the Plan consistent with the National Contingency Plan in effect at the time of submission?Section 1.2 (49 CFR 194.107(b)(1))Section 1.2 Please answer yes or no.	Section 1.1
16.2. Is the Plan consistent with the Area Contingency Plans in effect for each response zone at the time of submission? (49 CFR 194.107(b)(2))Section 1.2 Please answer yes or no.	Section 1.1
16.3. Is the Plan's concept of operations adequate to carry out a response to the worse case discharge under 49 CFR 194? (49 CFR 194.107)Section 1.2 Please answer yes or no.	Section 7.1, Appendix B, Appendix C.5, Entire Plan

Section 1.2

FIGURE D-2 - OSHA CROSS-REFERENCE

ERP REQUIREMENTS (29 CFR 1910.38)	LOCATION
(a) Application. An employer must have an emergency action plan whenever an OSHA standard in this part requires one. The requirements in this section apply to each such emergency action plan.	Section 1.2
(b) Written and oral emergency action plans. An emergency action plan must be in writing, kept in the workplace, and available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.	Section 1.2
(c) Minimum elements of an emergency action plan. An emergency action plan must include at a minimum:	Section 1.2
(1) Procedures for reporting a fire or other emergency;	Section 2, Section 3
(2) Procedures for emergency evacuation, including type of evacuation and exit route assignments;	Section 2.6
(3) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;	N/A
(4) Procedures to account for all employees after evacuation;	Section 2.6
(5) Procedures to be followed by employees performing rescue or medical duties; and	Section 2.3
(6) The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.	Figure 3.1-3, Figure 4.6-3
(d) Employee alarm system. An employer must have and maintain an employee alarm system. The employee alarm system must use a distinctive signal for each purpose and comply with the requirements in §1910.165.	Section 2.6.2
(e) Training. An employer must designate and train employees to assist in a safe and orderly evacuation of other employees.	Appendix A
(f) Review of emergency action plan. An employer must review the emergency action plan with each employee covered by the plan:	Appendix A.2
(1) When the plan is developed or the employee is assigned initially to a job;	Appendix A.2
(2) When the employee's responsibilities under the plan change; and	Appendix A.2
(3) When the plan is changed.	Appendix A.2

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (29 CFR 1910.120)	LOCATION
(q)(1) Emergency response plan. An emergency response plan shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives and OSHA personnel. Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan in accordance with 29 CFR 1910.38.	Section 1.2

FIGURE D-2 - OSHA CROSS-REFERENCE, CONTINUED

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (29 CFR 1910.120)				LOCATION
(q)(2)			Elements of an emergency response plan. The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:	Section 1.2
	(q)(2)(i)	Section 1.2	Pre-emergency planning.	Appendix C
	(q)(2)(ii)	Section 1.2	Personnel roles, lines of authority, training, and communication.	Section 4, Section 7.1.6, Appendix A.2
	(q)(2)(iii)	Section 1.2	Emergency recognition and prevention.	Section 2, Appendix C.3
	(q)(2)(iv)	Section 1.2	Safe distances and places of refuge.	SECTION 2.6
	(q)(2)(v)	Section 1.2	Site security and control.	Figure 2.1-1, Section 5.8, Section 7.2
	(q)(2)(vi)	Section 1.2	Evacuation routes and procedures.	Section 2.6
	(q)(2)(vii)	Section 1.2	Decontamination procedures which are not covered by the site safety and health plan.	Section 5.6
	(q)(2)(viii)	Section 1.2	Emergency medical treatment and first aid.	Section 2.3
	(q)(2)(ix)	Section 1.2	Emergency alerting and response procedures.	Figure 2-1, Section 2.6
	(q)(2)(x)	Section 1.2	Critique of response and follow-up.	Section 8.3
	(q)(2)(xi)	Section 1.2	PPE and emergency equipment.	Section 5.6, Section 7.1.1
(q)(3)			Procedures for handling emergency incidents.	Section 1.2
	(q)(3)(i)	Section 1.2	In addition to the elements for the emergency response plan required in paragraph (l)(2) of this section, the following elements shall be included for emergency response plans:	Section 1.2
Section 1.2	Section 1.2	(q)(3)(i)(A)	Site topography, layout, and prevailing weather conditions.	Figure 1-3, Figure 1-4, Section 6.1.1
Section 1.2	Section 1.2	(q)(3)(i)(B)	Procedures for reporting incidents to local, state, and federal governmental agencies.	Section 3.1, Section 3.2, Figure 3.1-5
	(q)(3)(ii)	Section 1.2	The emergency response plan shall be a separate section of the Site Safety and Health Plan.	Section 5.5
	(q)(3)(iii)	Section 1.2	The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.	Section 1.1
	(q)(3)(iv)	Section 1.2	The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.	Appendix A.2
	(q)(3)(v)	Section 1.2	The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.	Section 1.2

FIGURE D-2 - OSHA CROSS-REFERENCE, CONTINUED

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (29 CFR 1910.120)			LOCATION
(q)(3)(vi)	Section 1.2	An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.	Section 2.6
(q)(3)(vii)	Section 1.2	Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.	Figure 2-1, Section 2.1

FIGURE D-3 - WDOE CROSS-REFERENCE

WDOE (WAC 173-180-630)	LOCATION
Plan content requirements.	
(1) Each plan must contain a submittal agreement which:	Figure 1-6
(a) Includes the name, address, and phone number of submitting party;	Figure 1-6
(b) Verifies acceptance of the plan by the owner or operator of the facility by either signature of the owner or operator or signature by a person with authority to bind the corporation which owns or operates the facility;	Figure 1-6
(c) Commits the owner or operator of the facility to execution of the plan, and verifies that the plan holder is authorized to make appropriate expenditures in order to execute plan provisions; and	Figure 1-6
(d) Includes the name, location, and address of the facility, type of facility, starting date of operations, types of oil(s) handled, and oil volume capacity.	N/A
(2) Each plan must include a log sheet to record amendments to the plan. The log sheet must be placed at the front of the plan. The log sheet must provide for a record of the section amended, the date that the old section was replaced with the amended section, verification that ecology was notified of the amendment pursuant to WAC 173-180-670, and the initials of the individual making the change. A description of the amendment and its purpose must also be included in the log sheet, or filed in the form of an amendment letter immediately after the log sheet.	Record of Amendments
(3) Each plan must include a detailed table of contents based on chapter, section, and appendix numbers and titles, as well as tables and figures.	Table of Contents
(4) Each plan must describe its purpose and scope, including, but not limited to:	Section 1.1
(a) The onshore facility or offshore facility operations covered by the plan;	Section 1.1
(b) The relationship of the prevention plan to other oil spill plans and operation manuals held by the facility;	Section 1.1, Section 1.4
(c) The relationship of the plan to all applicable local, state, regional, tribal, and federal government prevention plans, including the Washington statewide master oil and hazardous substance spill contingency plan; and	Section 1.1, Section 1.4
(d) Information required under facility oil spill contingency plan standards in chapter 173-182 WAC; spill prevention, countermeasure, and control plan standards in 40 C.F.R. 112.4(a); or facility operations manual standards in 33 C.F.R. 154.310 (1-4) may be used to address (a) of this subsection.	Section 1.1
(5) Each plan must describe the procedures and time periods for updating the plan and distributing the plan and updates to appropriate parties.	Section 1.2
(6) Each plan must establish that the facility is in compliance with the Federal Oil Pollution Act of 1990. Within thirty calendar days after federal deadlines for facility requirements under that act, the plan must be updated to include any applicable evidence of compliance.	Section 1.1, Section 1.2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-180-630)	LOCATION
(7) Within thirty calendar days after evidence of financial responsibility is required by rules adopted by ecology pursuant to chapter 88.46 RCW, the plan must be updated to include any applicable evidence of compliance.	Section 7.5, Figure 7.5-1
(8) Each plan must describe the types and frequency of spill prevention training provided to personnel.	Appendix A.2
(9) Each plan must provide evidence that the facility has an approved oil spill contingency plan or has submitted a contingency plan to ecology in accordance with standards and deadlines established by chapter 173-182 WAC.	Section 1.6, Figure 1-6
(10) Each plan must address the facility's alcohol and drug use awareness and treatment program for all facility personnel.	Appendix A.3
(a) The plan must include at a minimum:	Appendix A.3
(i) Documentation of an alcohol and drug awareness program. The awareness program must provide training and information materials to all employees on recognition of alcohol and drug abuse; treatment opportunities, including opportunities under the Alcohol and Drug Addiction Treatment and Support Act pursuant to chapter 388-800 WAC; and applicable company policies;	Appendix A.3
(ii) A description of the facility's existing drug and alcohol treatment programs; and	Appendix A.3
(iii) A description of existing provisions for the screening of supervisory and key employees for alcohol and drug abuse and related work impairment.	Appendix A.3
(b) Evidence of conformance with applicable federal "Drug-Free Workplace" guidelines or other federal or state requirements may be used to address (a) of this subsection.	Appendix A.3
(11) Each plan must describe the facility's existing maintenance and inspection program.	Section 7.1.2, Appendix C.3, Appendix F
(a) The description must summarize:	Section 7.1.2, Appendix C.3, Appendix F
(i) Frequency and type of all regularly scheduled inspection and preventive maintenance procedures for tanks; pipelines; other key storage, transfer, or production equipment, including associated pumps, valves, and flanges; and overpressure safety devices and other spill prevention equipment;	Section 7.1.2, Appendix C.3, Appendix F
(ii) Integrity testing of storage tanks and pipelines, including but not limited to frequency; pressures used (including ratio of test pressure to maximum operating pressure, and duration of pressurization); means of identifying that a leak has occurred; and measures to reduce spill risk if test material is product;	Section 7.1.2, Appendix C.3, Appendix F

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-180-630)	LOCATION
(iii) External and internal corrosion detection and repair;	Section 7.1.2, Appendix C.3, Appendix F
(iv) Damage criteria for equipment repair or replacement; and	Section 7.1.2, Appendix C.3, Appendix F
(v) Any other aspect of the maintenance and inspection program.	Section 7.1.2, Appendix C.3, Appendix F
(b) The plan must include a current index of maintenance and inspection records of the storage and transfer facilities and related equipment.	Section 7.1.2, Appendix C.3, Appendix F
(c) Documentation required under 40 C.F.R. 112.7(e) or 33 C.F.R. 154 Subparts C and D may be used to address elements of this subsection.	Section 7.1.2, Appendix C.3
(d) Existing copies of the facility's maintenance and inspection records for the five-year period prior to plan submittal must be maintained and must be available for inspection if requested by ecology. The plan must document the use of a system to maintain such records over a five-year period for subsequent activity.	Section 7.1.2, Appendix C.3, Appendix F
(12) Each plan must describe spill prevention technology currently installed and in use, including:	Appendix C.3, Appendix F
(a) Tank and pipeline materials and design;	Appendix C.3, Appendix F
(b) Storage tank overflow alarms, low level alarms; tank overflow cut-off switches; automatic transfer shutdown systems; methods to alert operators; system accuracy; and tank fill margin remaining at time of alarm activation in terms of vertical distance, quantity of liquid, and time before overflow would occur at maximum pumping rate; documentation required under 40 C.F.R. 112.7 (e)(2)(viii) or 33 C.F.R. 154.310 (a)(12-13) may be used to address some or all of these elements;	Appendix C.3, Appendix F
(c) Leak detection systems for both active and nonactive pipeline conditions, including detection thresholds in terms of duration and percentage of pipeline flow; limitations on system performance due to normal pipeline events; and procedures for operator response to leak alarms;	Appendix C.3, Appendix F
(d) Documentation required under 40 C.F.R. 112.7 (e)(3) may be used to address some or all of these elements;	Appendix C.3
(e) Rapid pump and valve shutdown procedures, including means of ensuring that surge and over-pressure conditions do not occur; rates of valve closure; sequence and time duration (average and maximum) for entire procedure; automatic and remote control capabilities; and displays of system status for operator use;	Appendix C.3, Appendix F
(f) Documentation required under 40 C.F.R. 112.7 (e)(3) may be used to address some or all of these elements;	Appendix C.3

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-180-630)	LOCATION
(g) Methods to minimize post-shutdown residual drain-out from pipes, including criteria for locating valves; identification of all valves (including types and means of operation) that may be open during a transfer process; and any other techniques for reducing drain-out;	Appendix C.3, Appendix F
(h) Means of relieving pressure due to thermal expansion of liquid in pipes during quiescent periods;	Appendix C.3, Appendix F
(i) Secondary containment, including capacity, permeability, and material design;	Appendix C.3, Appendix F
(j) Documentation required under 40 C.F.R. 112.7 (e)(1) and (2)(iii-iv) may be used to address some or all of these elements;	Appendix C.3
(k) Internal and external corrosion control coatings and monitoring;	Appendix C.3, Appendix F
(l) Storm water and other drainage retention, treatment, and discharge systems, including maximum storage capacities and identification of any applicable discharge permits;	Appendix C.3, Appendix F
(m) Documentation required under 40 C.F.R. 112.7 (e)(1) and (2)(iii and ix) may be used to address some or all of these elements; and	Appendix C.3
(n) Criteria for suspension of operations while leak detection or other spill control systems are inoperative.	Appendix C.3, Appendix F
(13) Each plan must describe measures taken to ensure facility site security, including:	Section 7.2, Figure 7.2-2
(a) Procedures to control and monitor facility access;	Section 7.2, Figure 7.2-2
(b) Facility lighting (documentation required under 33 C.F.R. 154.570 may be used to address some or all of this element);	Section 7.2, Figure 7.2-2
(c) Signage; and	Section 7.2, Figure 7.2-2
(d) Right of way identification or other measures to prevent third-party damage (documentation required under 40 C.F.R. 112.7 (e)(3)(v) and (9) may be used to address some or all of this element).	Section 7.2, Figure 7.2-2
(14) Each plan must list any discharges of oil in excess of twenty-five barrels (one thousand fifty gallons) to the land or waters of the state which occurred during the five-year period prior to the plan submittal date. For each discharge, the plan must describe:	FIGURE D.2-2
(a) Quantity;	FIGURE D.2-2
(b) Type of oil;	FIGURE D.2-2
(c) Geographic location;	FIGURE D.2-2
(d) Analysis of cause, including source(s) of discharged oil and contributing factors (e.g., third party human error, adverse weather, etc.); and	FIGURE D.2-2
(e) Measures taken to remedy the cause and prevent a reoccurrence.	FIGURE D.2-2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-180-630)	LOCATION
The period between July 1, 1987, and January 1, 1993, the facility must provide existing information regarding (a) through (e) of this subsection for such discharges, and must document the use of a system to record complete information for subsequent discharges.	FIGURE D.2-2
(15) Each plan must include a detailed and comprehensive analysis of facility spill risks based on the information required in subsections (11) through (14) of this section, and other relevant information.	Appendix C.2.1, Appendix F
(a) The risk analysis must:	Appendix C.2.1Appendix F>
(i) Evaluate the construction, age, corrosion, inspection and maintenance, operation, and oil spill risk of the transfer, production, and storage systems in the facility, including piping, tanks, pumps, valves, and associated equipment;	Appendix C.2.1, Appendix F
(ii) Evaluate spill minimization and containment systems within the facility;	Appendix C.2.1, Appendix F
(iii) Be prepared under the supervision of (and bear the seal of) a licensed professional engineer or another individual which ecology has deemed to have an acceptable level of expertise.	Appendix F
(b) Documentation required under 40 C.F.R. 112.7 (b) and (e) may be used to address some or all of the elements of this subsection.	Appendix C.2.1
(16) Each plan must describe how the facility will incorporate those measures that will provide best achievable protection to address the spill risks identified in the risk analysis required in subsection (15) of this section.	Appendix C.2.1, Appendix C.3

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-140)	LOCATION
At least once annually, plan holders shall review the plan for accuracy and either:	Section 1.2
(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.	Section 1.2
WDOE (WAC 173-182-142)	**LOCATION**
(1) At any point during the five year approval period, if there is a temporary or permanent significant change in the personnel or response equipment described in the plan, the plan holder shall:	Section 1.2
(a) Notify ecology in writing within twenty-four hours of the change; and	Section 1.2
(b) Provide both a schedule for the prompt return of the plan to full operational status and a proposal for any backfill to compensate for the temporary significant change. This proposal shall be reviewed by ecology.	Section 1.2
(2) Changes which are considered significant include:	Section 1.2
(a) Loss of equipment that results in being out of compliance with any planning standard;	Section 1.2
(b) If greater than ten percent of available boom, storage, recovery, dispersants, in situ burn or shoreline clean-up equipment is moved out of the homebase as depicted on the WRRL;	Section 1.2
(c) Transfers of equipment to support spill response for out-of-region spills;	Section 1.2
(d) Permanent loss of initial response personnel listed in command and general staff ICS positions provided in the plan;	Section 1.2
(e) Permanent loss of personnel designated as the binding agreement signer;	Section 1.2
(f) Changes in normal operating procedures as described below:	Section 1.2
(i) For facilities changes in the oil types handled; permanent changes in storage capacity; changes in handling or transporting of any product; permanent changes in oil processing; and	Section 1.2
(ii) For vessels changes in the oil types handled.	N/A
(g) Changes in equipment ownership if used to satisfy a plan holder planning standard; or	Section 1.2
(h) Modification or discontinuing of any mutual aid, letter of intent or contract agreement.	Section 1.2
(3) Notification by facsimile or e-mail will be considered written notice.	Section 1.2
(4) Failure to report changes in the plan could result in the loss of plan approval.	Section 1.2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-142)	LOCATION
(5) If the proposed change to the plan is to be made permanent, the plan holder then shall have thirty calendar days from notification to ecology to distribute the amended page(s) of the contingency plan to ecology for review and approval.	Section 1.2
(6) If ecology finds that, as a result of a change, the plan no longer meets approval criteria; ecology may place conditions on approval or disapprove the plan.	Section 1.2
WDOE (WAC 173-182-145)	**LOCATION**
Every plan holder, including each person whose vessel enrolls in coverage under an umbrella plan, is required to implement the Washington approved plan in any 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.	Section 1.2
WDOE (WAC 173-182-150)	**LOCATION**
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 8.3
WDOE (WAC 173-182-210)	**LOCATION**
(1) Plan holders shall format and maintain plans to maximize their usefulness during a spill. Information shall be readily accessible and plans will contain job aids, diagrams and checklists for maximum utility.	All Sections
(2) Plans shall be divided into a system of numbered, tabbed chapters, sections and annexes/appendices. Each plan shall include a detailed table of contents based on chapter, section, and annex/appendix numbers and titles, as well as tables and figures.	Table of Contents
(3) Plans shall be formatted to allow replacement of pages with revisions without requiring replacement of the entire plan.	All Sections
WDOE (WAC 173-182-220)	**LOCATION**
(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 plan holder, owner or operator, or a designee with authority to bind the owners and operators of the facility or vessel covered by the plan. In the case of an umbrella plan, the umbrella plan holder that submitted the umbrella plan on behalf of enrolled vessels must sign the binding agreement. 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 1.3
(2) In the statement, the signator will:	Section 1.3
(a) Verify acceptance of the plan and commit to a safe and immediate response to spills and to substantial threats of spills that occur in, or could impact Washington waters or Washington's natural, cultural and economic resources;	Section 1.3

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-220)	LOCATION
(b) Commit to having an incident commander in the state within six hours after notification of a spill;	Section 1.3
(c) Commit to the implementation and use of the plan during a spill and substantial threat of a spill, and to the training of personnel to implement the plan;	Section 1.3
(d) Verify authority and capability of the plan holder to make necessary and appropriate expenditures in order to implement plan provisions; and	Section 1.3
(e) Commit to working in unified command within the incident command system to ensure that all personnel and equipment resources necessary to the response will be called out to cleanup the spill safely and to the maximum extent practicable.	Section 1.3
WDOE (WAC 173-182-230)	**LOCATION**
(1) Contingency plans must include all of the content and meet all of the requirements in this section.	Section 1.2
(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.	Section 1.4
(3) All contingency plans must include the following:	Section 1.2
(a) 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.	Appendix C.7, Appendix C.5
(i) 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 C.7
(ii) For vessel umbrella plans that enroll both tank vessels and nontank covered vessels, specify the worst case discharge volume and product type for both tank and nontank covered vessels for each port covered by the contingency plan.	N/A
(iii) For multiple facilities using a single umbrella plan, separate worst case spill volumes are required for each facility.	N/A
(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

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-230)	LOCATION
(d) Each plan shall have a cross-reference table reflecting the locations in the plan of each component required by this chapter.	FIGURE D-3
(e) Each plan shall have the PRC's name, address, phone number, or other means of contact at any time of the day.	Figure 3.1-4, Appendix B
(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 entire contract is not submitted, that document shall be available for inspection, if requested by the department.	Appendix B
(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.	Section 4, Appendix B
(v) If the entire contract for additional spill management team support is not included in the plan, that document shall be made available for inspection, if requested by ecology.	Appendix B
(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 5.7, Section 7.3
(4) Additional facility plan content. Facility plans shall include:	Section 1.2
(a) The name, location, type and address of the facility;	Figure 1-2
(b) Starting date of operations;	Figure 1-2
(c) Description of the operations covered by the plan:	Figure 1-2
(i) List the oil handling operations that occur at the facility location.	Figure 1-2, Appendix C
(ii) Inventory all tanks and list the tank capacity;	Appendix C.7.1
(iii) All oil(s) or product(s) handled by name and include; density, gravity, API, oil group number, and sulfur content (sweet/sour).	Appendix C.8
(iv) 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 1-2, Figure 1-3, Figure 1-4, Appendix C

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-230)	LOCATION
(v) A description of the geographic area that could be impacted from a spill at the location based on a forty-eight hour worst case spill trajectory analysis.	Section 6.7, Appendix C.2, Appendix C.5, FIGURE D.2-2, Section 2.1.4
(5) Additional vessel plan content:	N/A
(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
(d) Country of registry;	N/A
(e) All ports of call or areas of expected operation in Washington waters;	N/A
(f) List all oil(s) or product(s) by name and include; density, gravity, API, oil group number, sulfur content (sweet/sour) and general ship capacity for amounts carried as cargo or fuel;	N/A
(g) Description of the operations covered by the plan; and	N/A
(h) A 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:	N/A
(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 provide ecology twenty four hour access to the enrolled vessels list via the internet in a format acceptable to ecology. The list shall be updated daily, or at a minimum every three days. The list must at a minimum include the following:	N/A
(i) Vessel name;	N/A
(ii) Vessel type;	N/A
(iii) Worst case discharge oil type and quantity;	N/A
(iv) The name and API gravity of the densest oil being handled on the enrolled vessels;	N/A
(v) Qualified individual/spill management team;	N/A
(vi) Agent;	N/A
(vii) PRC/supplemental resources provider; and	N/A
(viii) Protection and indemnity (P&I) club.	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

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-230)	LOCATION
(7) Plans shall include concise procedures to establish a process to manage oil spill liability claims of damages to persons or property, public or private, for which a responsible party may be liable.	Section 7.5, Figure 7.5-1
WDOE (WAC 173-182-232)	**LOCATION**
(1) Approved umbrella plans provide an efficient and costeffective mechanism for enrolling vessel owner and operators in contingency plan coverage. Umbrella plans provide response resources to meet the requirements of this chapter. The umbrella plan may be approved for more than one worst case discharge, by port, in areas of operation covered by the plan. Any owner or operator of a covered vessel having a worst case discharge volume that exceeds resources under contract to the umbrella plan may still enroll only if, the vessel owner or operator maintains a contract with another primary response contractor that will provide supplemental response resources, and if those combined resources are sufficient to meet the requirements of this chapter. The vessel owner or operator must provide documentation that authorizes the umbrella plan holder to activate the supplemental response resources, sufficient to meet the worst case discharge of the covered vessel, during a drill, spill or substantial threat of a spill. Documentation must demonstrate the agreement and includes, but is not limited to, authorized representative and commitment letters from contractors, qualified individuals, insurance representatives, member signed enrollment agreements or other letters of intent.	N/A
(2) The plan must describe the process for activation of the supplemental resources and shall include the documentation described in subsection (1) of this section. The process for accessing supplemental equipment will be tested in drills.	N/A
WDOE (WAC 173-182-240)	**LOCATION**
(1) Each plan shall contain a field document which lists time critical information for the initial emergency phase of a spill and a substantial threat 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.	Emergency Procedures Field Guide, Figure 2-1
(2) At a minimum, the field document shall contain:	Section 1.2
(a) A list of the procedures to detect, assess and document the presence and size of a spill;	Emergency Procedures Field Guide
(b) Spill notification procedures and a call out list that meets the requirements in WAC 173-182-260 and 173-182-262 or 173-182-264 as applicable; and	Emergency Procedures Field Guide
(c) A checklist that identifies significant steps used to respond to a spill, listed in a logical progression of response activities.	Emergency Procedures Field Guide

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-242)	LOCATION
(1) Covered vessels that transit to or from a Washington port through the Strait of Juan de Fuca, except for transits extending no further west than Race Rocks Light, on Vancouver Island, Canada, must include the following information in their contingency plan:	N/A
(a) Documentation of the vessel owner/operators contracted access to an emergency response towing vessel (ERTV) at Neah Bay;	N/A
(b) Detailed information about the ERTV's capabilities and circumstances of potential activation and call out;	N/A
(c) A commitment in the plan to participate in drills that test compliance with the requirements of RCW 88.46.135; and	N/A
(d) Procedures for call out of the ERTV must be included in the field document.	N/A
(d) Plan holders may request drill credit for an actual deployment of the tug to respond to a spill or vessel emergency, provided the plan holder follows the requirements in WAC 173-182-730.	N/A
WDOE (WAC 173-182-250)	**LOCATION**
(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.	Section 2.1, Section 2.1.1, Section 5.2, Section 5.4, Section 5.4.2
(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 2.1.2, Figure 2.1-3
(3) The plan must state how safety assessment including initial air monitoring will be conducted for all types of spills, including spills to groundwater.	Figure 2.1-1, Section 2.1.2, Section 2.1.5, Section 2.1.7, Section 5.5, Section 6
(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 2.1
WDOE (WAC 173-182-260)	**LOCATION**
(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 3.1-3, Figure 3.1-4
(3) The procedure shall establish a clear order of priority for immediate notification.	Section 3.1, Figure 3.1-1, Figure 2-1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-262)	LOCATION
(1) The owner or operator of a covered vessel must notify the state through the Washington emergency management division of a discharge or substantial threat of a discharge. Notification must be made within one hour of the discharge or substantial threat of a discharge, or as soon as is feasible without further endangering the vessel or personnel.	N/A
(2) Vessel discharge notifications are in addition and made subsequent to notifications that the owner or operator of a covered vessel must provide to the United States Coast Guard. Vessels enrolled in umbrella plans must notify the umbrella plan holder in addition to the state, unless the state has already been notified by the umbrella plan holder on behalf of the vessel owner or operator.	N/A
(3) Notification of the discharge or substantial threat of a discharge initiates activation of the plan. Upon notification the vessel owner/operator will coordinate as appropriate with:	N/A
(a) The state of Washington and the United States Coast Guard to take any necessary actions to protect the public health, welfare, and natural resources of the state; and	N/A
(b) The umbrella plan holder for plan implementation as described in the plan.	N/A
(4) Notification procedures must be included in the plan.	N/A
(5) The substantial threat of a discharge may be determined or affected by the following conditions:	N/A
(a) Ship location and proximity to land or other navigational hazards;	N/A
(b) Weather;	N/A
(c) Tidal currents;	N/A
(d) Sea state;	N/A
(e) Traffic density;	N/A
(f) Condition of vessel; and	N/A
(g) Timing or likelihood of vessel repairs.	N/A
WDOE (WAC 173-182-264)	**LOCATION**
(1) Facility plans shall contain procedures for notifications for spills to ground and to permeable secondary containment that threaten to impact waters of the state.	Figure 2-1, Section 3.1, Section 3.2
(a) All spills are considered reportable spills except;	Section 3.2
(i) Spills which are known to be less than forty-two gallons that do not impact surface or groundwater.	Section 3.2
(ii) CERCLA releases.	Section 3.2
(iii) On-facility air releases to the atmosphere only.	Section 3.2
(iv) Releases from underground storage tanks regulated under chapter 173-360 WAC.	Section 3.2
(v) Preexisting sources of releases identified as RCRA solid waste management units.	Section 3.2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-264)	LOCATION
(vi) Spills contained within areas controlled by NPDES permitted systems that are not likely to threaten groundwater and do not exceed applicable federal reportable quantities.	Section 3.2
(b) A spill is considered to have not impacted ground if it occurs on a paved surface such as asphalt or concrete. A spill to dirt or gravel is considered to have impacted ground and is reportable.	Section 3.2
(2) Plan holders must also include procedures in their plan to address spills of an unknown volume. When addressing a spill of an unknown volume, plan holders shall use best professional judgment and may consider the following circumstances in determining when to make notifications:	Figure 2-1
(a) Whether the spill is ongoing; and	Figure 2-1
(b) Whether the spill is located in an area that is adjacent to waters of the state or where there is a pathway to waters of the state, and the environmental conditions, such as rain events, or known shallow groundwater make impacts to waters of the state likely.	Figure 2-1
WDOE (WAC 173-182-270)	**LOCATION**
(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, Figure A.1-2, Figure A.1-4, FIGURE D.3-1
(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, Figure A.1-2, Figure A.1-4, FIGURE D.3-1
WDOE (WAC 173-182-280)	**LOCATION**
(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:	Section 1.2
(a) An organizational diagram depicting the chain of command for the spill management team for a worst case spill.	Figure 4.6-2
(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 3.1-3, Figure 4.6-3, Section 5.4.4

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-280)	LOCATION
(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 5
(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, Section 6.1
(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.	Figure 2-1, Figure 3.1-1, Section 4, Section 5.3
(5) Covered vessel umbrella plans must maintain a list of the spill management team(s) for each vessel enrolled under the plan, and must describe the transition process from umbrella plan personnel to the incoming vessel owner or operator's team. The plan must include checklists and documentation to facilitate an effective transition.	N/A
WDOE (WAC 173-182-310)	**LOCATION**
(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.	Section 2, Section 8, Appendix A
(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.	Section 1.2

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-315)	LOCATION
Each facility plan holder shall plan to obtain nondedicated work boats and operators that will be available to deploy GRPs, enhance skimming, and to provide 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 7.1.1, Appendix B, Appendix C.5
WDOE (WAC 173-182-317)	**LOCATION**
(1) This section applies to owners and operators of covered vessels and covered vessel plan holders who are required to have a plan for the use of VOO. In order to enhance the ability to respond to spills using nondedicated resources, Washington state approved PRCs cannot be identified in the plan as VOO. The VOO may be used in the following ways:	N/A
(a) Protecting of sensitive habitats through the placement of oil spill booms;	N/A
(b) On-water oil recovery in the nearshore environment;	N/A
(c) Providing logistical spill response support; or	N/A
(d) Supporting other tactical actions.	N/A
(2) In order for a commercial vessel to be considered for the VOO program, the owner or operator will self-register through the on-line process developed by ecology, or through use of a form provided by ecology. VOO operators must renew their information annually, and will supply the following information as applicable to the vessel:	N/A
(a) Name of vessel;	N/A
(b) Length of vessel;	N/A
(c) Year, make, and model of the vessel;	N/A
(d) Vessel engine type(s) and horsepower;	N/A
(e) Number of passengers certified to carry;	N/A
(f) Number of cabins/berths;	N/A
(g) The vessel's Lloyds Registry and/or International Maritime Organization (LR/IMO) number or official number;	N/A
(h) Vessel operator contact information;	N/A
(i) Vessel crew training records relevant to oil spill response;	N/A
(j) Date of the most recent marine survey;	N/A
(k) Date of the most recent USCG compliance inspection or boarding;	N/A
(l) Date of expiration of USCG Certificate of Compliance or Certificate of Inspection, or Fishing Vessel Safety Examination Decal.	N/A
(m) Vessel P&I club affiliation;	N/A
(n) Vessel homeport and vessel hailing port;	N/A
(o) Residence(s) of vessel owner and crew;	N/A
(p) Tactics vessel would like to support;	N/A
(q) Seasonal operations of the vessel;	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-317)	LOCATION
(r) Drug testing program for captain and crew; and	N/A
(s) Plan holder or PRC with which the vessel is contracted. VOO operators may contract with multiple plan holders or primary response contractors.	N/A
(3) In order for a recreational vessel to be considered for the VOO program the owner or operator will self-register through the on-line process developed by ecology, or through use of a form provided by ecology. VOO operators must renew their information annually, and will supply at a minimum the following information to the extent applicable to the vessel:	N/A
(a) Name of vessel;	N/A
(b) Length of vessel;	N/A
(c) Year, make, and model of the vessel;	N/A
(d) Vessel engine type(s) and horsepower;	N/A
(e) Number of cabins/berths;	N/A
(f) The state registration number and/or USCG documentation number or other official number;	N/A
(g) Vessel owner contact information;	N/A
(h) Vessel owner/crew training relevant to oil spill response;;	N/A
(i) Date of the most recent marine survey;	N/A
(j) Date of the most recent USCG Auxiliary Dockside Courtesy Inspection;	N/A
(k) Vessel insurance information and coverage plan;	N/A
(l) Vessel homeport and vessel hailing port;	N/A
(m) Tactics vessel would like to support;	N/A
(n) Residence of vessel owner; and	N/A
(o) Plan holder or PRC with which the vessel is contracted. VOO operators may contract with multiple plan holders or primary response contractors.	N/A
(4) For planning purposes VOO will be organized by regions, see map of VOO regions in the regulations. The regions are designed to ensure adequate numbers of VOO for contracting. Covered vessel plan holders shall have contracted access to VOO in the regions they transit or operate. VOO from all regions may be cascaded into the spill area if the VOO capability is appropriate for the operating environment. The regional areas include:	N/A
(a) Region 1: Cape Flattery/Strait of Juan de Fuca.	N/A
(b) Region 2: San Juan Islands/North Puget Sound.	N/A
(c) Region 3: South Puget Sound/Central Puget Sound.	N/A
(d) Region 4: Lower Columbia River.	N/A
(e) Region 5: Admiralty Inlet/Hood Canal and North Central Puget Sound.	N/A
(f) Region 6: Grays Harbor.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-317)	LOCATION
(5) For each region a vessel plan holder transits or operates the plan holder must have a contract with the prescribed number of Tier I VOO below. VOO are nondedicated resources; the minimum number of VOO required assumes that one out of every two contracted vessels may be available at any time. In each region a percentage of the VOO must be pretrained and capable of the following tactics: On-water recovery in the nearshore environment, protection of sensitive areas, and logistical support with no more than fifty percent to be pretrained exclusively for logistical support.	N/A
(a) Region 1: Plan holders must have contracts with a minimum of eighteen VOO at the Tier I level.	N/A
(b) Region 2: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level.	N/A
(c) Region 3: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level.	N/A
(d) Region 4: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level.	N/A
(e) Region 5: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level.	N/A
(f) Region 6: Plan holders must have contracts with a minimum of six VOO at the Tier I level.	N/A
(6) Plan holder obligations, as identified within this section, are subject to an adequate number of suitable and capable vessels enrolling with ecology. Plan holders may propose for review and approval an alternative planning standard for a VOO region if, after a good faith effort to contract with the minimum numbers of VOO, the plan holder is not successful. The alternative proposal must provide an equivalent or higher level of protection in terms of spill preparedness and response when compared with the planning standard. This proposal will be subject to a thirty-day public review and comment period, which includes, but is not limited to, interested local and tribal governments and other stakeholders. The alternative proposal must include:	N/A
(a) Documentation that there are insufficient numbers of VOO registered.	N/A
(b) Documentation describing the selection criteria and a description of how the Tier II enrolled vessels do not meet the criteria.	N/A
(c) A detailed description of the alternative being proposed.	N/A
(7) Vessels of opportunity will be designated in one of the following two tiers:	N/A
(a) Requirements for Tier I designated vessels include:	N/A
(i) Under contract with the plan holder.	N/A
(ii) Pretrained crew through a combination of classroom training, computer based education, equipment familiarization, and field training exercises appropriate to the tactics the vessel may be assigned, including:	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-317)	LOCATION
(A) Pretrained crew through a combination of classroom training, computer based education, equipment familiarization, and field training exercises appropriate to the tactics the vessel may be assigned, including:	N/A
(B) Basic incident command system training;	N/A
(C) Participation annually in at least one on-water training for the tactics for which the VOO is contracted;	N/A
(D) Participate in at least one on-water deployment drill every three years.	N/A
(iii) The department shall be invited to attend all VOO training events.	N/A
(iv) Training records must be maintained for a period of five years. Training records shall be made available to the department upon request.	N/A
(v) The vessel should agree under contract to make best efforts, if available, to mobilize within twelve hours of call out with crew as trained per this section.	N/A
(b) Tier II designated vessels include: Commercial and recreational vessels that self-identify their interest in participation in the VOO program but are not under contract to a plan holder. Vessel plan holders shall describe in their contingency plan the process for rapidly training and contracting the Tier II vessels for at least logistical support tactics.	N/A
(8) VOO drill requirements:	N/A
(a) Plan holders shall incorporate Tier I VOO into deployment drills and tabletop drills.	N/A
(b) Tabletop drills may incorporate simulated call out of vessels of opportunity by identifying the vessel and crew available to respond on the day of the drill. Data collected during the simulated call out shall include vessel name, crew names, estimated time of arrival on scene, availability on the day of the spill and the ability to support the response over days or weeks, and the task force or staging assignment of the vessel of opportunity.	N/A
WDOE (WAC 173-182-320)	**LOCATION**
Each facility plan shall provide for aerial oil tracking resources capable of being on-scene within six hours of spill notification. 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 2.1.2, Figure 2.1-3, Figure 3.1-3, Figure 3.1-4, Appendix B

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-321)	LOCATION
Covered vessels operating or transiting the lower Columbia River, Grays Harbor, Strait of Juan de Fuca, Puget Sound, or Washington coast, shall document the following aerial surveillance capability through the plan:	N/A
(1) Access to a helicopter or fixed wing, under contract or other approved means, that is appropriately located and could have arrived with a trained aerial oil spill spotter (spotter) to those planning standard areas plan holders operate or transit within six hours of spill notification. The contracted asset must have the following capability:	N/A
(a) Be capable of supporting oil spill containment and removal operations by providing oil spotting capability for at least ten hours per day during the initial seventy-two hours of an oil discharge.	N/A
(b) Have a trained spotter on board the aerial asset capable of acquiring, interpreting, recording and communicating oil location and other information to the command post or field operations at regular intervals. The spotter must be equipped with a high definition photographic or video capability and be able to collect and disseminate the following data about the environmental and operational picture including the location of the oil, environmental impacts, and spill resources on-scene:	N/A
(i) Latitude and longitude of the location, impacts, or spill resources;	N/A
(ii) Azimuth and altitude that the picture was taken;	N/A
(iii) Bearing that the picture was taken;	N/A
(iv) Estimated extent of oiling; and	N/A
(v) Time and date.	N/A
(2) Plans must also include logistical sources of additional resources not under contract that may be utilized as additional spotting resources to maximize the effectiveness of enhanced skimming, or as resources to identify the extent of oil to inform shoreline clean-up and assessment teams and shoreline clean-up activities.	N/A
(3) In order to provide best achievable technology for aerial oil surveillance, vessel plan holders must also provide for access to a helicopter or fixed wing asset, under contract or other approved means, with the capability to provide a strategic picture of the overall spill; assist in location of slicks when they are not visible by persons operating at, or near, the water's surface or at night; extend the hours of clean-up operations to include darkness and poor visibility; identify oceanographic and geographic features toward which oil may migrate.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-321)	LOCATION
(a) The aerial asset must be appropriately located and could have arrived with trained aerial observers to those planning standard areas plan holders operate or transit within twelve hours of spill notification.	N/A
(b) The aerial asset must be equipped with a suite of equipment that could support the capabilities described in this subsection. At least two remote sensing systems must be included in the suite and one of them must be a high definition mounted infrared (IR) camera designed to support aerial operations from aerial platforms. If the IR camera is not mounted, then plan holders must demonstrate how the handheld system will be effective from an aerial platform. Plan holders must submit for approval the systems included in the suite. For the IR camera, the following capability descriptions must be included in the submission:	N/A
(i) IR camera with sensors capable in the thermal or mid-IR range;	N/A
(ii) A sensor which provides high resolution for airborne imaging;	N/A
(iii) Continuous optical zoom capability appropriate for use from an aerial platform;	N/A
(iv) Tested minimum thermal resolution and/or the tested minimum resolvable temperature difference; and	N/A
(v) Plan holders must submit for review and approval the systems included in the suite. Plan holders may submit for review and approval alternative testing data. This alternative proposal will be subject to a thirty-day public review and comment period which includes, but is not limited to, interested local and tribal governments and other stakeholders.	N/A
(c) The trained oil spill aerial observer on board could begin gathering the following from the scene of the spill once on-site:	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE INDEX, CONTINUED

WDOE (WAC 173-182-321)	LOCATION
(i) Graphically displaying processed multispectral data (at a minimum displaying the IR and optical windows), photographic images and other information onto electronic marine charts creating high contrast composite images;	N/A
(ii) Ability to reference a map image to a geographic location;	N/A
(iii) Location extent and relative thickness information for a reported oil sheen or slick;	N/A
(iv) Transmitting processed images and other information to the unified command primary command post;	N/A
(v) Archiving all processed data and images; and	N/A
(vi) Integrating spill images and other information with spill management software.	N/A
(4) Plan holders must have access to personnel trained in aerial surveillance and as spotters to direct skimmers into the thickest oil to enhance on-water recovery and to support the activities described above. The names of individuals with this training, their home base and training levels must either be listed in the plan or made available to ecology upon request. At a minimum, personnel must be trained in aerial observation at the level set forth in federal regulations currently located at 33 C.F.R. 155.1050 (l)(2)(iii). A copy of this regulation is available through ecology upon request.	N/A
WDOE (WAC 173-182-324)	**LOCATION**
(1) Plan holders carrying, handling, storing, or transporting Group 5 Oils must have a contract with a PRC that maintains the resources and/or capabilities necessary to respond to a spill of Group 5 Oils. Such equipment shall include, but is not limited to, the following:	Appendix B
(a) Sonar, sampling equipment or other methods to locate the oil on the bottom or suspended in the water column;	Appendix B
(b) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;	Appendix B
(c) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;	Appendix B

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-324)	LOCATION
(d) Equipment necessary to assess the impact of such discharges; and	Appendix B
(e) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.	Appendix B
(2) The equipment must be capable of being on scene within twelve hours of spill notification.	Appendix B
WDOE (WAC 173-182-325)	**LOCATION**
(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.	Section 6.4
(2) The plan holder must identify the locations of dispersant stockpiles, and dispersant type, capable of dispersing the lesser of five percent of the worst case spill volume or twelve thousand barrels per day, using a dispersant to oil ratio of one to twenty.	Section 6.4
(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.	Section 6.4
(4) The plan holder must describe operational support capability, including the platforms and spotters used to deploy dispersants, monitor the operational efficacy of the dispersant application to support operational decision making, and ensure safety of response personnel.	Section 6.4
(5) These resources must be capable of being on scene within twelve hours of spill awareness.	Section 6.4
WDOE (WAC 173-182-330)	**LOCATION**
(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.	N/A
(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
(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
(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
(5) These resources must be capable of being on scene within twelve hours of spill notification.	N/A
WDOE (WAC 173-182-335)	**LOCATION**
(1) Plan holders shall identify both on-water devices and shoreside interim storage locations.	Section 7.1.1, Figure 7.3-5

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-335)	LOCATION
(a) For marine waters, shoreside storage can be identified to meet fifty percent of storage requirements in the tables located in the regulations, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage.	Figure 7.3-5
(b) For freshwater environments, shoreside storage can be identified to meet sixty-five percent of the storage requirements in the tables located in the regulations, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage.	Figure 7.3-5
(2) For covered vessel plan holders, at least twenty-five percent of the total worst case discharge volume at twenty-four hours, from the planning standard tables below, must be dedicated to on-water storage.	N/A
WDOE (WAC 173-182-345)	**LOCATION**
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:	Section 7.1, Section 7.3, Appendix C
(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, Section 7.3, Appendix C
(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
WDOE (WAC 173-182-348)	**LOCATION**
(1) Plan holders and PRCs that own recovery equipment shall request an EDRC using the following procedures and the criteria in Title 33 C.F.R. 155, Appendix B, Section 6, "Determining Effective Daily Recovery Capacity for Oil Recovery Devices."	Appendix B, Appendix C
(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, Appendix C

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-348)	LOCATION
(3) Equipment owners may request an alternative EDRC by providing all of the following information:	N/A
(a) A description of the recovery system which includes skimmer, boom, pump, work boats, and storage associated with the device;	N/A
(b) Description of deployment methods that will be used to enhance the recovery system to maximize oil encounter rate during spills;	N/A
(c) Documented performance during verified spill incidents; and	N/A
(d) Documentation of laboratory testing using ASTM standard methods (ASTM F 631-80) or equivalent test approved by the U.S. Coast Guard.	N/A
(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.	N/A
WDOE (WAC 173-182-349)	**LOCATION**
(1) Each covered vessel plan holder that operates or transits in the Neah Bay, Cathlamet, or San Juan Islands planning standard areas must provide a technical manual that includes all of the equipment appropriate for the operating environment that is necessary to meet the recovery and storage requirements, through the forty-eight hour time frame.	N/A
(2) The technical manuals will be used to inform the five year BAP cycle and support ecology's determination that the response systems, training levels, and staffing demonstrate best available protection.	N/A
(3) Plan holders must use a systems approach to identify the equipment, including WRRL identification or other unique identification numbers, that will be used to describe the response systems in the technical manual. For each recovery system described include the following:	N/A
(a) An operational picture or diagram of the recovery system, the EDRC for the system, and associated temporary storage;	N/A
(b) The infrastructure and support resources necessary for deployment;	N/A
(c) Associated vessels necessary to enhance the skimmer;	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-349)	LOCATION
(d) At least three hundred feet of boom to enhance the skimmer or an alternative based on manufacturers recommendations;	N/A
(e) The mobilization time and home base for the equipment;	N/A
(f) The ownership or mechanism for accessing the equipment for example, under contract, subcontract or letter of intent to the plan holder or other approved means;	N/A
(g) If applicable, the ability of the recovery system to be used to support night operations;	N/A
(h) The minimum number of personnel necessary to deploy the equipment for a twelve hour shift and the training level of personnel appropriate to operate the equipment and carry out recovery;	N/A
(i) If alternative speeds are given for equipment associated with a recovery system the information should be included in the equipment description; and	N/A
(j) The oil type(s) the associated skimmer is optimized for.	N/A
(4) For the storage requirement include the following:	N/A
(a) An operational picture or diagram and capacity of the storage system;	N/A
(b) The infrastructure and support resources necessary for deployment;	N/A
(c) The mobilization time and home base for the equipment;	N/A
(d) The ownership or mechanism for accessing the equipment for example under contract, subcontract or letter of intent to the planholder or other approved means;	N/A
(e) The minimum number of personnel necessary to deploy the equipment for a twelve hour shift and the training level of personnel appropriate to operate the equipment;	N/A
(f) If applicable the ability of the storage system to be used to support night operations;	N/A
(g) If alternative speeds are given for equipment associated with the storage device the information should be included in the equipment description.	N/A
(5) The technical manual is a standalone planning standard and is not intended to be used to demonstrate compliance with any other planning standards. Technical manuals are not intended to bind the use of any specific tactics during a drill or spill or to imply a guarantee of what will occur in a real spill event.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-350)	LOCATION
The plan holder shall describe how the planning standards found in this chapter are met.	Section 1.2
(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.	Figure 3.1-3, Figure 4.6-3, Section 7.1.1, Figure 7.1-1, 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.	Figure 3.1-3, Section 7.1.1, Figure 7.1-1, Appendix B, Figure C.7-2
(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 or the time specified in the letter of intent, mutual aid agreement or contract.	Figure 3.1-3, Figure 7.1-1, Appendix B
(4) Equipment travel speeds shall be computed using a speed of thirty-five miles per hour for land and five knots for water. Ecology may use geographic information systems (GIS), standard nautical charts, street maps and available on-line mapping programs to determine the length of time it will take equipment to cover a given distance.	Section 7.1.1, Figure 7.1-1
(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.	N/A
(a) The request shall include date and time of performance or test, under average or typical weather/sea state conditions and transportation information.	N/A
(b) If ecology accepts these alternative response times, then these response times will be tested in unannounced drills or spills to verify alternative calculations.	N/A
(c) If ecology grants plan holder or PRC owned response equipment an alternative mobilization, transit speed, recovery or storage volume, through the plan review process, and the alternative is not demonstrated to the satisfaction of the department during a drill or spill, it may result in disapproving the alternative.	N/A
WDOE (WAC 173-182-355)	**LOCATION**
Transfer sites for covered vessels at locations where transfers occur, and for facilities with a vessel terminal.	N/A
WDOE (WAC 173-182-365)	**LOCATION**
(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.	Section 6.7

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-365)	LOCATION
(a) To determine the two-hour booming requirements, select the widest river within the WRIA.	Figure C.7-2
(b) Determine the average river speed at this location.	Figure C.7-2
(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.	Figure C.7-2
(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.	Figure C.7-2
(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.	Figure C.7-2
(2) Or alternatively, the two hour standard will be two thousand feet of boom.	Figure C.7-2
(3) Boom required for the two hour standard shall be dedicated to spill response and should be staged in various locations along the pipeline.	Figure C.7-2
WDOE (WAC 173-182-370)	**LOCATION**
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
WDOE (WAC 173-182-375)	**LOCATION**
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
WDOE (WAC 173-182-380)	**LOCATION**
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at (b) (7)(F), (b) (3) (WGS 1984) must meet the following standards.	N/A
WDOE (WAC 173-182-385)	**LOCATION**
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at (b) (7)(F), (b) (3) (WGS 1984) must meet the following standards.	N/A
WDOE (WAC 173-182-390)	**LOCATION**
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at (b) (7)(F), (b) (3) WGS 1984) must meet the following standards.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-395)	LOCATION
Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at (b) (7)(F), (b) (3) (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
WDOE (WAC 173-182-400)	**LOCATION**
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 (b) (7)(F), (b) (3) (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
WDOE (WAC 173-182-405)	**LOCATION**
Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at (b) (7)(F), (b) (3) (b) (7)(F), (b) (3) (WGS 1984) outside the entrance to Grays Harbor must meet these standards.	N/A
WDOE (WAC 173-182-410)	**LOCATION**
Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at (b) (7)(F), (b) (3) (b) (7)(F), (b) (3) (WGS 1984) outside the entrance to Willapa Bay must meet these standards.	N/A
WDOE (WAC 173-182-415)	**LOCATION**
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 hour planning standards must be resident.	N/A
WDOE (WAC 173-182-420)	**LOCATION**
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
WDOE (WAC 173-182-430)	**LOCATION**
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.	Section 7.1.1, Figure 7.1-1, Appendix B, Figure C.7-2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-450)	LOCATION
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:	N/A
(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 notification;	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
WDOE (WAC 173-182-510)	**LOCATION**
(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 2.1, Section 6.2, Section 6.3
(2) Each plan shall include a description of how environmental protection will be achieved, including:	Section 1.2
(a) Protection of sensitive shoreline and island habitat by diverting or blocking oil movement;	Section 6.2, Section 6.3
(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, Appendix C.2
(c) Identification of public resources, including public beaches, water intakes, drinking water supplies, and marinas;	Section 6.7, Appendix C.2
(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 6.7, Appendix C.2
(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.	Section 6

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-510)	LOCATION
(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.	Section 6.1
(4) Each plan shall identify potential initial command post locations.	Section 2.6
WDOE (WAC 173-182-520)	**LOCATION**
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 C.F.R. Part 155 Appendix B and 33 C.F.R. 154 Appendix C.	Section 6, Appendix B, Section 7.1, Section 7.3, Figure 3.1-3, Figure 3.1-4
WDOE (WAC 173-182-522)	**LOCATION**
(1) Each contingency plan shall include procedures for identifying shoreline types that could be impacted by an oil spill and procedures to determine appropriate response tactics for the potentially impacted shorelines during spills. The plan should describe contracted access to shoreline clean-up workers and shoreline clean-up equipment to ensure the following capability can plan to arrive within twenty-four hours of spill notification:	N/A
(a) Plan holders must have contracted access to one hundred trained shoreline clean-up workers. The shoreline clean-up workers must have appropriate safety and Hazwoper training and will not be counted towards other planning standards. The training should enable clean-up workers to safely perform cleanup actions under the direction of the supervisors and the work assignment as developed by the unified command.	N/A
(b) Plan holders must have contracted access to trained shoreline clean-up supervisors. Training for supervisors must include safety, Hazwoper, and relevant ICS courses. For planning purposes a ratio of 1:10 supervisors to clean-up workers should be available under contract to the plan holder. The shoreline clean-up supervisors will not be counted towards other planning standards. Supervisors must understand the ICS process and be able to direct workers consistent with the work assignments as developed by unified command.	N/A
(c) Plan holders shall have access to adequate equipment for passive recovery for three miles of shoreline on three tide lines. The plan must identify the staging location(s) of the shoreline clean-up equipment.	N/A
(d) The plan holder must have access to a shoreline clean-up mobile storage cache that can support eighty to one hundred shoreline clean-up workers with personal protective equipment, hand tools, and other logistical support for three to five days.	N/A
(2) Plan holders must describe how data collection, communications, data transmission and data management will be conducted.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-522)	LOCATION
(3) The plan shall describe how the plan holder will obtain additional resources necessary to support fourteen additional days of shoreline cleanup. The description should include vendor names, contact information, resources, and approximate time frames for resources to arrive at a staging area.	N/A
WDOE (WAC 173-182-530)	**LOCATION**
(1) Each facility plan shall include a description of the methods to be used to immediately assess ground water spills.	Section 2.1, Section 6
(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 3.2, Figure 3.1-4
WDOE (WAC 173-182-540)	**LOCATION**
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 notification.	Section 6.5, Figure 3.1-4, Figure A.2-2, Appendix B
WDOE (WAC 173-182-610)	**LOCATION**
Plan holders shall prepare a plan that demonstrates capability, to the maximum extent practicable, of promptly and properly removing oil and minimizing environmental damage from a variety of spill sizes, up to and including worst case spills. Ecology will evaluate plans based on these conditions:	WDOE Evaluation
(1) Only ecology approved PRC resources, plan holder owned resources and resources guaranteed through written mutual aid agreements or letters of intent or agreement shall be counted when calculating the planning standards. In the case of nondedicated storage devices, these will be derated by fifty percent of maximum storage volume (counted at a one to two ratio) and acquisition of these resources will be tested in unannounced drills.	WDOE Evaluation
(2) If a plan holder operates in an area where more than one planning standard designation applies, ecology will determine the more stringent of planning standards.	WDOE Evaluation
(3) Ecology will count equipment if it is appropriate for the operating environment within the geographic area defined in the plan. Ecology will use criteria from sources such as the ASTM International documents, World Catalogue, manufacturer's recommendations, the Regional Response list, the federal Oil Spill Removal Organization guidelines, the *Field Operations Guide* resource typing guidelines and drills and spills to make approval and verification determinations on operating environments.	WDOE Evaluation
(4) Ecology will count boom if it is appropriate to the operating environment and support equipment is identified. Support equipment for boom means transportation devices, cranes, anchors, boom tackle, connectors, work boats and operators.	WDOE Evaluation
(5) Ecology will only count dedicated response resources towards the two hour standards.	WDOE Evaluation

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-620)	LOCATION
(1) A plan holder may request that ecology review and approve a plan based on alternative planning standards. Such requests should be submitted with the plan and shall be subject to a thirty day public review period and comment period which includes, but is not limited to, interested local and tribal governments and other stakeholders.	WDOE Evaluation
(2) The proposal must include, at a minimum:	WDOE Evaluation
(a) A reference to which planning standard(s) in this chapter the proposal will be substituted for;	WDOE Evaluation
(b) A detailed description of the alternative proposal including equipment, personnel, response procedures, and maintenance systems that are being proposed; and	WDOE Evaluation
(c) An analysis of how the proposal offers equal or greater protection or prevention measures as compared to the requirement in this chapter.	WDOE Evaluation
(3) Ecology may approve the alternative compliance proposal if, based upon the documents submitted and other information available to the agency, it finds that:	WDOE Evaluation
(a) The alternative compliance proposal is complete and accurate; and	WDOE Evaluation
(b) The alternative compliance proposal provides an equivalent or higher level of protection in terms of spill preparedness and response when compared with the planning standards found in this chapter.	WDOE Evaluation
(4) Ecology may reconsider an approval at any time, in response to lessons learned from spills, drills, and significant plan changes which indicated that the requirements of this section for approval are not met.	WDOE Evaluation
WDOE (WAC 173-182-621)	**LOCATION**
(1) Ecology will review the planning standards at five-year intervals to ensure the maintenance of best achievable protection to respond to a worst case spill and provide for continuous operation of oil spill response activities to the maximum extent practicable and without jeopardizing crew safety.	WDOE Evaluation
(2) Ecology will adopt a five-year review cycle to ensure that the planning standards are updated to include proven new response technologies and response processes. In addition plan holders and other interested parties will be provided an opportunity to present information and proposals regarding spill prevention credits to support an alternative worst case discharge volume for the contingency plan. The review cycle is designed to evaluate BAP by assessing contributing elements including:	WDOE Evaluation
(a) Best achievable technology;	WDOE Evaluation
(b) Staffing levels;	WDOE Evaluation
(c) Training procedures; and	WDOE Evaluation
(d) Operational methods.	WDOE Evaluation
(3) The review cycle will be used to evaluate a variety of spill operations, tools, and technologies including, but not limited to, the following:	WDOE Evaluation
(a) Advancing systems for the removal of oil from the surface of the water;	WDOE Evaluation

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-621)	LOCATION
(b) Improving the performance of existing skimmer/boom and storage systems technology;	WDOE Evaluation
(c) Improving the performance of in situ burn and dispersants technology;	WDOE Evaluation
(d) Broadening the environmental conditions under which oil spill cleanup can take place;	WDOE Evaluation
(e) Ensuring that the technology is deployable and effective in a real world spill environment; and	WDOE Evaluation
(f) Considering tools or technology that are designed, produced, and manufactured in an energy-efficient process and products are reuseable, recyclable, and reduce waste.	WDOE Evaluation
(4) Ecology may use the following processes to inform and update the use of BAP in the planning standards by:	WDOE Evaluation
(a) Convening an advisory committee(s) to assist ecology during the five-year review cycle and promote BAP.	WDOE Evaluation
(b) Evaluating the recovery systems identified in the technical manual during the five-year cycle to determine best achievable technology, and inform the development of future planning standards.	WDOE Evaluation
(c) Sponsoring a technology conference during the five-year cycle in cooperation with persons, organizations, and groups with interests and expertise in relevant technologies; or	WDOE Evaluation
(d) Conducting or reviewing studies, inquiries, surveys, or analyses appropriate to the consideration of new technologies, plan evaluation methods including EDRC, or best operational practices.	WDOE Evaluation
(5) Ecology may prepare reports following either of the actions described in subsection (4) of this section. These reports will identify the new technologies, processes, techniques or operational practices that ecology considers to represent BAP.	WDOE Evaluation
(6) Ecology will provide an opportunity for a thirty-day public review and comment period on the draft report.	WDOE Evaluation
(7) Ecology will use the developed reports to update the contingency planning rule as necessary every five years.	WDOE Evaluation
WDOE (WAC 173-182-630)	**LOCATION**
(1) Upon receipt of a plan, ecology shall evaluate whether the plan is complete, and if not, the plan holder shall be notified of any deficiencies within five business days. The public review and comment period does not begin until a complete plan is received.	WDOE Evaluation

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-630)	LOCATION
(2) Once a plan has been determined to be complete, ecology shall notify interested parties, including local and tribal governments and make the plan available for public review and comment. Ecology will accept comments on the plan no later than thirty days after the plan has been made publicly available. No later than sixty-five days from the date of public notice of availability, ecology will make a written determination that the plan is disapproved, approved, or conditionally approved. The written determination will be provided in the form of an order and subject to appeal as specified in chapter 43.21B RCW.	WDOE Evaluation
(a) If the plan is approved, the plan holder receives a certificate of plan approval and plan expiration dates. Approved plans shall be valid for five years.	WDOE Evaluation
(b) If a plan is conditionally approved, ecology may require a plan holder to operate under specific restrictions until unacceptable components of the plan are revised, resubmitted and approved. In the conditional approval ecology will describe:	WDOE Evaluation
(i) Each specific restriction and the duration for which they apply;	WDOE Evaluation
(ii) Each required item to bring the plan into compliance; and	WDOE Evaluation
(iii) The schedule for plan holders to submit required updates, including a reference to the regulatory standard in question.	WDOE Evaluation
(iv) Restrictions may include, but are not limited to, additional information for the plan, reducing oil transfer rates, increasing personnel levels, or restricting operations to daylight hours. Restrictions may also include additional requirements to ensure availability of response equipment.	WDOE Evaluation
(v) Conditional approval expires no later than eighteen months from date of issue before the plan holder must request an extension which is subject to public review.	WDOE Evaluation
(vi) Ecology shall revoke its conditional approval prior to the expiration date of a plan holder who fails to meet the terms of the conditional approval. The revocation will be in the form of an appealable order.	WDOE Evaluation
(c) If plan approval is disapproved, the plan holder shall receive an explanation of the factors.	WDOE Evaluation
(3) The owner or operator or plan holder shall not engage in oil storage, transport, transfer, or other operations without an approved or conditionally approved plan. Umbrella plan holders shall not enroll any vessels in a plan that has not been approved or conditionally approved, by ecology.	WDOE Evaluation
(4) Ecology may review a plan following an actual spill or drill of a plan and may require revisions as appropriate.	WDOE Evaluation

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-630)	LOCATION
(5) Public notice will be given of any plan approval, conditional approval, or disapproval of a plan.	WDOE Evaluation
WDOE (WAC 173-182-640)	**LOCATION**
(1) The purpose of this section is to specify the procedures for notifying the public which includes interested local and tribal governments about contingency plan status and decisions in order to provide opportunities for the public to review and comment.	WDOE Evaluation
(2) In order to receive notification of the public review and comment period, interested public, local, and tribal governments must sign up on a listserv. Ecology's web site will also be used to post notice of public review and comment periods.	WDOE Evaluation
(3) Public comment periods must extend at least thirty days. Public notice, review, and comment periods are required in the following circumstances:	WDOE Evaluation
(a) Plan submittals for facilities or vessels that have never submitted a plan in Washington;	WDOE Evaluation
(b) Plan updates required by WAC 173-182-130;	WDOE Evaluation
(c) The submittal of plans for five-year review as required by WAC 173-182-120;	WDOE Evaluation
(d) Requests for an alternative planning standard in accordance with WAC 173-182-620;	WDOE Evaluation
(e) Plan holder requests for drill requirement waivers in accordance with WAC 173-182-740; and	WDOE Evaluation
(f) PRC applications submitted under WAC 173-182-810.	WDOE Evaluation
(4) Public notice, review, and comment period are not required in the following circumstances:	WDOE Evaluation
(a) Routine updates to names, phone numbers, formatting, or forms that do not change the approved content of the plan;	WDOE Evaluation
(b) Plan updates to resubmit the binding agreement based on changes to the binding agreement signer; and	WDOE Evaluation
(c) Annual plan reviews that result in a letter to ecology confirming that the existing plan is still accurate.	WDOE Evaluation
WDOE (WAC 173-182-700)	**LOCATION**
(1) Plan holders and primary response contractors (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, Section 7.1
(2) Plan holders and PRCs shall ensure ecology is provided an opportunity to help design and evaluate all tabletop and deployment drills for which the plan holder desires drill credit. To ensure this, plan holders shall schedule drills on the NWACP area exercise calendar. Scheduling requirements are noted in the table in WAC 173-182-710 of the regulations.	Appendix A.1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-700)	LOCATION
(3) Ecology shall mail a written drill evaluation report for drills to the plan holder following each deployment and tabletop drill. Credit will be granted for drill objectives that are successfully met.	Appendix A.1
(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.	Appendix A.1
(5) Where plan deficiencies have been identified in the written evaluation, plan holders may be required to make specific amendments to the plan or conduct additional trainings to address the deficiencies.	Appendix A.1
(6) A plan holder may request an informal review with ecology of the ecology drill evaluation within thirty days of receipt of the report.	Appendix A.1
WDOE (WAC 173-182-710)	**LOCATION**
The following drills shall be conducted within each triennial cycle.	Appendix A.1
(1) Tabletop drills:	Appendix A.1
(a) Tabletop drills are intended to demonstrate a plan holder's capability to manage a spill using the incident command system (ICS). Role playing shall be required in this drill. During all required tabletop drills plan holders must provide a master list of equipment and personnel identified to fill both command post and field operations roles. The master resources list must include:	Appendix A.1
(b) Western regional response list identification numbers for all response resources; and	Appendix A.1
(c) Personnel names, affiliation, home base and command post or field role.	Appendix A.1
(2) 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. However, at ecology's discretion, team members that are out-of-state may be evaluated in out-of-state tabletop drills if ecology has sufficient notice, an opportunity to participate in the drill planning process, and provided 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 six years.	Appendix A.1
(3) Umbrella plan holders and ecology shall together design a systematic approach to, over time, involve all spill management teams identified in WAC 173-182-230 (6)(a) in tabletop and deployment drills as a best practice to demonstrate the preparedness of enrolled vessel members. These drills will be scheduled by the plan holder or unannounced to be conducted by ecology, at the discretion of ecology. These drills may test any plan components but at a minimum will include notification to the enrolled vessel qualified individual, coordination of supplemental resources under WAC 173-182-232 and the transition from the umbrella plan spill management team to the enrolled vessel company spill management team.	Appendix A.1
(4) Equipment deployment drills: Plan holders shall use deployment drills to demonstrate the actions they would take in a spill, including: Notifications, safety actions, environmental assessment, and response equipment deployment.	Appendix A.1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-710)	LOCATION
(a) During the triennial cycle, deployment drills shall include a combination of plan holder owned assets, contracted PRC assets, nondedicated assets, and vessels of opportunity.	Appendix A.1
(b) Plan holders should ensure that each type of dedicated 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 and the suitability of the system for the operating environment. Drills shall be conducted in all operating environments that the plan holder could impact from spills.	Appendix A.1
(c) At least twice during a triennial cycle, plan holders shall deploy a geographic response plan (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.	Appendix A.1
(d) Plan holders may request credit for the prebooming of an oil transfer provided the transfer is scheduled as a deployment on the drill calendar. Such credit may only be requested once per triennial cycle.	Appendix A.1
(5) Plan holders may receive credit for deployment drills conducted by PRCs if:	Appendix A.1
(a) The PRC is listed in the plan; and	Appendix A.1
(b) The plan holder operates in the area, schedules on the drill calendar, and participates in or observes the drill.	Appendix A.1
(6) Additional large-scale multiple tank vessel plan holder equipment deployment drill requirement. Once every three years all tank vessel plan holders, including vessel umbrella plan holders that enroll tank vessels, must participate in a multiple plan holder deployment exercise. At least one plan holder shall be the drill planning lead, participate in all the planning meetings and observe the drill. This deployment may include the following objectives:	N/A
(a) Demonstration of dedicated and nondedicated equipment and trained contracted personnel;	N/A
(b) Demonstration of contracted vessel of opportunity response systems and crew performing operations appropriate to the vessel capabilities;	N/A
(c) Demonstration of multiple simultaneous tactics including:	N/A
(i) On-water recovery task forces made up of complete systems which demonstrate storage, recovery, and enhanced skimming;	N/A
(ii) Protection task forces which deploy multiple GRPs;	N/A
(iii) Vessel and personnel decontamination and disposal;	N/A
(iv) Deployment of contracted aerial assessment assets and aerial observers to direct skimming operations; and	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-710)	LOCATION
(v) Personnel and equipment identified for night operations.	N/A
(d) Verification of the operational readiness during both the first six hours of a spill and over multiple operational periods.	N/A
(7) Additional deployment requirement for vessel plan holders with contracted access to the ERTV. Once every three years plan holders with contracted access to the ERTV must cosponsor a drill that includes deployment of the ERTV, unless ERTV drill credit has already been received under WAC 173-182-242 (1)(e). This drill must be scheduled on the area exercise calendar. The drill shall include at a minimum:	N/A
(a) Notifications and tug call out;	N/A
(b) Safety and environmental assessment;	N/A
(c) Demonstration of making up to, stopping, holding, and towing a drifting or disabled vessel;	N/A
(d) Demonstration of the capability to hold position within one hundred feet of another vessel; and	N/A
(e) Communications.	N/A
(8) Additional deployment requirement for all plan holders. Once every three years plan holders must deploy regional mobile wildlife rehabilitation equipment and personnel necessary to set up the wildlife rehabilitation system found in the plan. This is an additional deployment drill unless it is incorporated into a large multiobjective deployment drill.	Appendix A.1
(9) For all plan holders, ecology may initiate scheduled inspections and unannounced deployment and tabletop drills.	Appendix A.1
(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.	Appendix A.1
(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.	Appendix A.1
(c) Unannounced notification drills are designed to test the ability to follow the notification and call-out process in the plan.	Appendix A.1
(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.	Appendix A.1
(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.	Appendix A.1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-720)	LOCATION
The ecology drill evaluation process is based on the National Preparedness for Response Exercise Program (NPREP) guidance document. The NPREP guidance document lists fifteen core components that shall be demonstrated by the plan holder during the triennial cycle. Ecology adopts the fifteen core components as the criteria used to evaluate plan holder tabletop and deployment drills. The core components are as follows:	Figure A.1-1
(1) Notifications: Test the notifications procedures identified in the plan.	Figure A.1-1
(2) Staff mobilization: Demonstrate the ability to assemble the spill response organization identified in the plan.	Figure A.1-1
(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.	Figure A.1-1
(4) Source control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source.	Figure A.1-1
(5) Assessment: Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.	Figure A.1-1
(6) Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.	Figure A.1-1
(7) Recovery: Demonstrate the ability of the spill response organization to recover, mitigate, and remove the discharged product. Includes mitigation and removal activities, e.g., dispersant use, in situ burn use, and bioremediation use.	Figure A.1-1
(8) Protection: Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the NWACP and the plan.	Figure A.1-1
(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.	Figure A.1-1
(10) Communications: Demonstrate the ability to establish an effective communications system throughout the scope of the plan for the spill response organization.	Figure A.1-1
(11) Transportation: Demonstrate the ability to provide effective multimode. Transportation both for execution of the discharge and support functions.	Figure A.1-1
(12) Personnel support: Demonstrate the ability to provide the necessary logistical support of all personnel associated with the response.	Figure A.1-1
(13) Equipment maintenance and support: Demonstrate the ability to maintain and support all equipment associated with the response.	Figure A.1-1
(14) Procurement: Demonstrate the ability to establish an effective procurement system.	Figure A.1-1
(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.	Figure A.1-1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-730)	LOCATION
(1) Plan holders may request drill credit for a response to an actual spill, provided that ecology has an opportunity to participate and evaluate the spill response. Credit from spills shall not entirely alleviate the plan holder's responsibility to drill. To obtain credit, a written request to ecology shall be made within sixty days of completion of the cleanup operations.	Section 1.2
(a) The request shall include documentation supporting the components of WAC 173-182-720.	Section 1.2
(b) Plan holders shall have up to ninety days to submit a lessons learned summary supporting the request for drill credit.	Section 1.2
(2) Plan holders may request drill credit for out-of-state tabletop drills if:	Section 1.2
(a) Ecology has been invited to attend the drill;	Section 1.2
(b) Ecology has an opportunity to participate in the planning process for the drill. There shall be a meeting to discuss the scope and scale of the exercise, the drill objectives and the types of criteria for which Washington credit may be applicable;	Section 1.2
(c) Documentation of the drill and self certification documentation shall be provided to ecology within thirty days of the drill;	Section 1.2
(d) The plan holder has one response plan for a number of facilities or a fleet of vessels; and	Section 1.2
(e) Plan holders seeking credit for a scheduled out-of-state drill shall notify ecology in writing ninety days in advance, to provide ecology an opportunity to participate.	Section 1.2
WDOE (WAC 173-182-740)	**LOCATION**
(1) Plan holders may request a waiver for a deployment or tabletop drill requirements.	Section 1.2
(2) The request shall be in writing and shall describe why a waiver should be considered and how the plan holder is meeting the purpose and intent of the drill program with the waiver.	Section 1.2
(3) Plan holder's requests for a drill waiver will be made available for public review and comment, including interested local and tribal governments and other stakeholders, for a period of thirty days.	Section 1.2
(4) Ecology will evaluate the request and respond in writing within sixty calendar days of receipt of the letter.	Section 1.2
WDOE (WAC 173-182-800)	**LOCATION**
(1) To become a state-approved PRC, a response contractor must:	N/A
(a) Submit an application as set forth in subsection (2) of this section;	N/A
(b) Have a process to provide twenty-four hour/day contact for spill response;	N/A
(c) Commit to begin mobilization efforts immediately upon notification but no later than one hour from notification of a spill;	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-800)	LOCATION
(d) Maintain equipment in accordance with manufacturer specifications;	N/A
(e) Identify and train staff and supervisors expected to be deployed on oil spill response tactics or used to meet plan holder planning standards;	N/A
(f) Assist plan holders in meeting the requirements for plans and drills in Washington; and	N/A
(g) List response equipment on the western regional response list currently located at www.wrrl.us, or provide an equivalent electronic equipment list and commit to maintaining the equipment list in whatever format is provided.	N/A
(2) To apply, a contractor should complete, sign and submit the application form number ECY 070-216.	N/A
WDOE (WAC 173-182-810)	**LOCATION**
The PRC application must contain the following information as applicable to the capabilities of the PRC:	N/A
(1) A list of primary response contractor personnel indicating whether they are full-time, part-time, or subcontracted including their homebase or office location, and the spill management team roles or tactical roles they may fill in a response.	N/A
(a) If personnel are available to the primary response contractor via subcontract a summary of the contract terms for personnel resources should be included in the application. The contract shall be made available to ecology upon request.	N/A
(b) A list of all staff training, including training of subcontractors if applicable, and a description of the frequency of essential core training response staff receive.	N/A
(c) The training program must be specific to the tactics the PRC intends to perform. Include in the application details about the following training areas as applicable:	N/A
(i) Safety training;	N/A
(ii) Training on-site safety assessment;	N/A
(iii) Assessment of environmental conditions;	N/A
(iv) Determination that equipment is appropriate for the conditions;	N/A
(v) Air monitoring equipment and documentation; and	N/A
(vi) Development of a hazard worksheet.	N/A
(d) Additional training as necessary for personnel that may be relied upon to perform these tasks:	N/A
(i) Conducting site safety briefings;	N/A
(ii) Use and deployment of limited visibility tracking devices;	N/A
(iii) Utilization and coordination of communications equipment;	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-810)	LOCATION
(iv) Transfer of a product from skimmer to on-water and shoreside storage;	N/A
(v) Containment of a land spill from entering water by channeling, diverting, or berming;	N/A
(vi) Fast water river response strategies;	N/A
(vii) High current marine response strategies;	N/A
(viii) GRP or protection strategy familiarization and deployment;	N/A
(ix) Anchoring and setting boom;	N/A
(x) Familiarization and deployment of PRC owned oiled-wildlife rehabilitation equipment;	N/A
(xi) On water recovery including enhanced skimming;	N/A
(xii) Directing field resources;	N/A
(xiii) Incident command system training for spill management team roles.	N/A
(2) A list of all communication assets by type and location. The frequencies and geographical ranges must be included. This list must be maintained and if not included in the application made available to ecology upon request.	N/A
(3) A list of response equipment must be submitted electronically to ecology or via western response resource list, at www.wrrl.us, containing the following information:	N/A
(a) All equipment must be given a unique company identifier, and this identifier must be submitted on the list provided to ecology.	N/A
(b) Equipment must include the minimum number of personnel required to operate successfully for one shift.	N/A
(c) The location the equipment is stored using latitude/longitude in the WGS 1984 coordinate system. The coordinates must be in decimal degree format.	N/A
(d) The type of equipment, including manufacturer's name, manufacture date, model and specifications.	N/A
(e) For boom, list the length, manufacturer's name, model, size, and date of manufacture.	N/A
(f) For oil recovery devices state the manufacturer's name, model, EDRC or approved alternative, manufacture date, and operating environment.	N/A
(g) For temporary storage list the maximum capacity in barrels.	N/A
(h) For workboats list the vessel name and/or identifier, length, and vessel type, manufacturer, engine type(s) and horsepower.	N/A
(4) A detailed description of the vessel of opportunity program.	N/A
(5) A detailed description of other response technologies systems available such as in situ burn, bioremediants, and other chemical agents.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-810)	LOCATION
(6) A detailed description of any wildlife rescue and rehabilitation resources. Include a list of contracts or agreements with any trained wildlife rescue and rehabilitation personnel.	N/A
(7) A detailed description of equipment and personnel that would be used for shoreline cleanup. This should include a description of training resources for additional clean-up personnel.	N/A
(8) A list of agreements for access to shoreside storage. Include the owner, location, and general estimate of volume.	N/A
(9) A list of agreements for fixed wing and rotary aircraft used to support spill clean-up operations.	N/A
(10) A detailed description of remote sensing equipment and aerial surveillance resources and personnel that the primary response contractor has under contract or letter of intent that could be used to detect and track the extent and movement of oil or direct on-water recovery operations.	N/A
(11) Once an application is received, ecology will determine whether it is complete. If not, the response contractor shall be notified of deficiencies in writing and given a time period for submitting the required information.	N/A
(12) Equipment and personnel readiness will be verified once the application is approved. Ecology may inspect equipment, training records, maintenance records, drill records, and may request a test of the call-out procedures, and require operation of each type of equipment listed in the application. These inspections may be conducted at any/all equipment locations. Any resources not on-site at the time of an inspection shall be accounted for by company records.	N/A
(13) If the application is approved and the verification is satisfactory, the contractor shall receive a letter of approval describing the terms of approval, including expiration dates and EDRC of the recovery equipment. PRC approvals will be reviewed by ecology every three years. Applications shall be resubmitted forty-five calendar days in advance of the expiration date.	N/A
(14) Once the PRC application is approved, the PRC must certify in writing on a quarterly basis that the list of equipment the contractor maintains in their application or on the WRRL is accurate. Any contractor that doesn't maintain their list on the WRRL, must resubmit their electronic list on a quarterly basis.	N/A
(15) Notification by facsimile or e-mail will be considered written notice.	N/A
(16) Failure to certify the accuracy of the equipment list on a quarterly basis may result in the loss of PRC approval.	N/A
(17) If the application is not approved, the contractor shall receive an explanation of the factors for disapproval and a list of actions to be taken to gain approval.	N/A
(18) Approval of a response contractor by ecology does not constitute an express assurance regarding the adequacy of the contractor nor constitute a defense to liability imposed under state law.	N/A

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-820)	LOCATION
(1) The PRC is responsible to provide written notification to ecology and all plan holders to whom they are obligated, within twenty-four hours, of any significant change in the information reported in the approved application. The notice shall include the identification of back up resources sufficient to maintain the PRC readiness level, and the estimated date that the original equipment shall be back in full service.	N/A
(2) Changes which are considered significant include:	N/A
(a) Loss of equipment that results in being out of compliance with any planning standard of any plan holder covered by the PRC;	N/A
(b) Transfers of equipment to support spill response for out-of-region spills;	N/A
(b) Transfers of equipment to support spill response for out-of-region spills;	N/A
(d) Permanent loss of primary response contractor personnel identified to fill ICS positions for plan holders;	N/A
(e) Changes in equipment ownership if used to satisfy a plan holder planning standard; or	N/A
(f) Modification or discontinuing of any mutual aid, letter of intent, or contract agreement.	N/A
(3) Notification by facsimile or e-mail will be considered written notice.	N/A
(4) Failure to report changes could result in the loss of PRC approval.	N/A
(5) If ecology determines that PRC approval conditions found in WAC 173-182-800 are no longer met, approval may be revoked. The PRC will receive a written notice of the loss of approval and a time period to either appeal or correct the deficiency.	N/A
(6) Ecology will immediately notify plan holders of changes in the approval status of PRCs or significant changes in PRC capability.	N/A
WDOE (WAC 173-182-900)	**LOCATION**
Ecology may verify compliance with this chapter by examining training and equipment maintenance records, drill records, accuracy of call-out and notification lists, spill management team lists, ICS forms, waste disposal records, post-spill reviews and records on lessons learned.	Section 1.2
WDOE (WAC 173-182-910)	**LOCATION**
(1) If an owner or operator of a covered vessel, onshore or offshore facility, a person or plan holder is unable to comply with an approved contingency plan or otherwise fails to comply with requirements of this chapter, ecology may, at its discretion:	Section 1.2
(a) Place conditions on approval; and	Section 1.2
(b) Require additional drills to demonstrate effectiveness of the plan; or	Section 1.2
(c) Revoke the approval status.	Section 1.2
(2) Approval of a plan by ecology does not constitute an express assurance regarding the adequacy of the plan nor constitute a defense to liability imposed under state law.	Section 1.2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-182-910)	LOCATION
(3) Any violation of this chapter may be subject to the enforcement and penalty sanctions.	Section 1.2
(4) Ecology may assess a civil penalty of up to one hundred thousand dollars against any person who is in violation of this section. Each day that a covered vessel, facility or person is in violation of this section shall be considered a separate violation.	Section 1.2
WDOE (WAC 173-182-920)	**LOCATION**
(1) A covered vessel may not enter or operate on the waters of the state without an approved, or conditionally approved, contingency plan, except that a covered vessel not in compliance with this chapter may enter waters of the state if the Coast Guard has determined that the vessel is in distress.	N/A
(2) The owner or operator of an onshore or offshore facility may not operate without an approved, or conditionally approved, plan nor transfer cargo or passengers to or from a covered vessel that does not have an approved, or conditionally approved, contingency plan. The owner or operator of a covered vessel may not transfer oil to or from an onshore or offshore facility that does not have an approved or conditionally approved contingency plan.	Section 1.5
(3) Ecology may assess a civil penalty under RCW43.21B.300 of up to one hundred thousand dollars against any person who is in violation of this section. In the case of a continuing violation, each day's continuance shall be considered a separate violation.	Section 1.2
(4) Any person found guilty of willfully violating any of the provisions of this section, or any final written orders or directive of ecology or a court shall be deemed guilty of a gross misdemeanor and upon conviction shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the county jail for not more than one year, or by both such fine and imprisonment in the discretion of the court. Each day upon which a willful violation of the provisions of this chapter occurs may be deemed a separate and additional violation.	Section 1.2
WDOE (WAC 173-182-930)	**LOCATION**
If any provision of this chapter is held invalid, the remainder of the rule is not affected.	Section 1.2
WDOE (WAC 173-303-350)	**LOCATION**
Agency filings affecting this section	
Contingency plan and emergency procedures.	
(1) Purpose. The purpose of this section and WAC 173-303-360 is to lessen the potential impact on the public health and the environment in the event of an emergency circumstance, including a fire, explosion, or unplanned sudden or nonsudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater by a facility. A contingency plan must be developed to lessen the potential impacts of such emergency circumstances, and the plan must be implemented immediately in such emergency circumstances.	Section 1.1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-303-350)	LOCATION
(2) Contingency plan. Each owner or operator must have a contingency plan at his facility for use in emergencies or sudden or nonsudden releases which threaten human health and the environment. If the owner or operator has already prepared a spill prevention control and countermeasures (SPCC) plan in accordance with Part 112 of Title 40 C.F.R. or Part 1510 of chapter V, or some other emergency or contingency plan, they need only amend that plan to incorporate dangerous waste management provisions that are sufficient to comply with the requirements of this section and WAC 173-303-360. The owner or operator may develop one contingency plan that meets all regulatory requirements. Ecology recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan") as found at www.nrt.org. When modifications are made to nondangerous waste (non-Hazardous Waste Management Act or nondangerous waste regulation) provisions in an integrated contingency plan, the changes do not trigger the need for a dangerous waste permit modification.	Section 7.3
(3) The contingency plan must contain the following:	Section 1.2
(a) A description of the actions which facility personnel must take to comply with this section and WAC 173-303-360;	Section 2, Section 7.3
(b) A description of the actions which will be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported, pursuant to the requirements of WAC 173-303-370 (6), Manifest system, reasons for not accepting dangerous waste shipments;	Section 7.3
(c) A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services as required in WAC 173-303-340(4);	Figure 2-1, Section 4.4
(d) A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1). Where more than one person is listed, one must be named as primary emergency coordinator, and others must be listed in the order in which they will assume responsibility as alternates. For new facilities only, this list may be provided to the department at the time of facility certification (as required by WAC 173-303-810 (14)(a)(i)), rather than as part of the permit application;	Figure 1-2
(e) A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities; and	Section 7.1.1

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-303-350)	LOCATION
(f) An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	Section 2.6
(4) Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:	Figure 1-1
(a) Maintained at the facility; and	Figure 1-1
(b) Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.	Figure 1-1
(5) Amendments. The owner or operator must review and immediately amend the contingency plan, if necessary, whenever:	Section 1.2
(a) Applicable regulations or the facility permit are revised;	Section 1.2
(b) The plan fails in an emergency;	Section 1.2
(c) The facility changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or in a way that changes the response necessary in an emergency;	Section 1.2
(d) The list of emergency coordinators changes; or	Section 1.2
(e) The list of emergency equipment changes.	Section 1.2
WDOE (WAC 173-303-360)	**LOCATION**
No agency filings affecting this section since 2003	
Emergencies.	
(1) Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (that is, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, required by WAC 173-303-350(2), all operations and activities at the facility, the location and properties of all wastes handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.	Figure 1-2, Section 4.5
(2) Emergency procedures. The following procedures must be implemented in the event of an emergency.	Section 1.2
(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:	Section 1.2
(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and	Figure 2-1, Section 2.6.2

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-303-360)	LOCATION
(ii) Notify appropriate state or local agencies with designated response roles if their help is needed.	Figure 2-1, Section 3
(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials.	Section 2.1.2, Section 2.1.3, Section 2.1.4, Section 2.1.5
(c) Concurrently, the emergency coordinator must assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that may result from the release, fire, or explosion.	Figure 2-1, Section 2.1.7
(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment, he must report his findings as follows:	Section 1.2
(i) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and	Figure 2-1, Section 2.6
(ii) He must immediately notify the department and either the government official designated as the on-scene coordinator, or the National Response Center (using their 24-hour toll free number (800) 424-8802).	Figure 2-1
(e) His assessment report must include:	Section 1.2
(i) Name and telephone number of reporter;	Figure 3.1-2
(ii) Name and address of facility;	Figure 3.1-2
(iii) Time and type of incident (e.g., release, fire);	Figure 3.1-2
(iv) Name and quantity of material(s) involved, to the extent known;	Figure 3.1-2
(v) The extent of injuries, if any; and	Figure 3.1-2
(vi) The possible hazards to human health or the environment outside the facility.	Figure 3.1-2
(f) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.	Section 2, Section 7.3

FIGURE D-3 - WDOE CROSS-REFERENCE, CONTINUED

WDOE (WAC 173-303-360)	LOCATION
(g) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	Figure 2-1, Section 2.1
(h) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	Section 7.3
(i) The emergency coordinator must ensure that, in the affected area(s) of the facility:	Section 1.2
(i) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and	Section 7.3
(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.	Section 5.6, Section 7.3
(j) The owner or operator must notify the department, and appropriate local authorities, that the facility is in compliance with (i) of this subsection before operations are resumed in the affected area(s) of the facility.	Section 8.1
(k) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, he must submit a written report on the incident to the department. The report must include:	Figure 3.1-5
(i) Name, address, and telephone number of the owner or operator;	Figure 3.1-5
(ii) Name, address, and telephone number of the facility;	Figure 3.1-5
(iii) Date, time, and type of incident (e.g., fire, explosion);	Figure 3.1-5
(iv) Name and quantity of material(s) involved;	Figure 3.1-5
(v) The extent of injuries, if any;	Figure 3.1-5
(vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable;	Figure 3.1-5
(vii) Estimated quantity and disposition of recovered material that resulted from the incident;	Figure 3.1-5
(viii) Cause of incident; and	Figure 3.1-5
(ix) Description of corrective action taken to prevent reoccurrence of the incident.	Figure 3.1-5

FIGURE D-4 - WSDA CROSS-REFERENCE

WDOE (WAC 16-201-260)	LOCATION
(1) The operator of a permanent storage facility shall prepare a written spill response plan for the permanent storage facility. If all or portions of the information required by the spill response plan have been prepared for plans required by other government agencies, they need not be prepared for this plan: Provided, That the information is readily accessible to emergency responders and department personnel. However, when copies of the plan are distributed, all required information shall be provided. The plan shall include the following elements:	Entire Plan
(a) The identity and telephone numbers of the persons and agencies who are to be contacted in the event of a spill, including persons responsible for the stored fertilizer.	Figure 3.1-3, Figure 3.1-4
(b) For each fertilizer stored at the permanent storage facility a complete copy of the storage container labeling required in WAC 16-201-170, and the labeling required to accompany sale of the fertilizer under the Washington Commercial Fertilizer Act, chapter 15.54 RCW.	Section 5
(c) A material safety data sheet for each fertilizer stored at the permanent storage facility.	FIGURE D.8-3
(d) The procedures to be used for controlling and recovering, or otherwise responding to a spill for each type of bulk fertilizer stored at the permanent storage facility.	Section 2, Figure 3.1-1, Section 6, Section 7
(e) The procedures to be followed in using or disposing of a recovered spill.	Section 7.3
(2) The plan shall be kept current at all times.	Section 1.2
(3) A copy of the spill response plan shall be kept readily available for inspection and use at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered and shall be available for inspection and copying by the department.	Figure 1-1
(4) A copy of the spill response plan shall be provided to the local fire department.	Figure 1-1
(5) Persons employed at permanent storage facilities shall be trained in spill response procedures pursuant to the spill response plan.	Appendix A
(6) Emergency equipment and supplies. Every permanent storage facility shall have access to pumps and recovery containers which can be used to control and recover spills. Pumps, recovery containers and persons capable of deploying and operating them shall be readily available in an emergency. Pumps and recovery containers may include those operated by a local fire department or other persons: Provided, That the use and availability of the pumps and recovery containers is arranged in advance as part of the spill response plan. Absorbent materials and other equipment suitable for the control and cleanup of smaller spills shall be available at the permanent storage facility. The permanent storage facility shall maintain a list showing the types and locations of clean-up supplies and equipment. The list shall be maintained at the permanent storage facility or the nearest local office from which the facility is administered.	Figure 3.1-3, Figure 3.1-4, Section 7.1.1, Section 7.3, Appendix B

FIGURE D-5 - OR DEQ CROSS-REFERENCE

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) CROSS-REFERENCE INDEX (340-141-0100)	LOCATION
Plan Preparation	Section 1.2
(1) The owner or operator of each onshore and offshore facility handling or storing 10,000 gallons of oil or more per day and of each covered vessel must prepare a contingency plan for the prevention, containment and cleanup of oil spills from the facility or vessel into the navigable waters of the state, and for the protection of fisheries and wildlife, other natural resources and public or private property from such spills.	Section 1.2
(2) Plans must be in a form usable for oil spill prevention, control, containment, cleanup and disposal operations and must be capable of being located as required by OAR 340-141-0210(1) and (2).	Section 1.2
(3) Plans must be thorough and contain enough information, analyses, supporting data and documentation to demonstrate the plan holder's ability to meet the requirements of this Division.	Section 1.2
(4) Plans must be designed to promptly and properly remove oil and minimize environmental damage to the maximum extent practicable. They must cover a variety of spill sizes, including average most probable spills and worst case spills. At a minimum, plans must meet the plan content criteria specified in OAR 340-141-0140 and meet the planning standards in 340-141-0150.	Section 1.2
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0130)	**LOCATION**
Plan Format Requirements	Section 1.2
(1) Plans must be prepared using a combination of narrative and graphic formats that provide both detailed spill response information and quick access to general information needed during an emergency response.	Section 1.2
(2) Plans must be divided into a system of chapters and appendices. Chapters and appendices must be numbered. Chapters should be reserved primarily for information on emergency response and cleanup operations, such as notification procedures or description of the spill response organization structure. Appendices should be used primarily for supplemental background information and documentation such as response strategies or descriptions of drills and exercises. The spill prevention strategies may be part of the appendices.	Section 1.2
(3) A system of index tabs must be used to provide easy reference to particular chapters and appendices.	Section 1.2
(4) Plans must be formatted to allow replacement of revised pages and components without requiring replacement of the entire plan.	Section 1.2
(5) Plans must include a simplified field document that summarizes key notification and action elements of the plan and is suitable for onsite use in the event of a spill.	Section 1.2
(6) Plans may be submitted and updated electronically if all required plan components are in a form the Department can easily access. The Department will determine which types of electronic media are acceptable for the plan submittal.	Section 1.2
(7) Composite plans that rely on standard documents the Department already has on file may incorporate those documents by reference.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140)	LOCATION
Plan Content Requirements	Section 1.2
(1) Submittal Agreement. Each plan must contain a submittal agreement that:	Figure 1-6
(a) Includes the name, address and phone number of the submitting party;	Figure 1-6
(b) Verifies acceptance of the plan, including any incorporated contingency plans, by the owner or operator of the facility or covered vessel by either signature of the owner or operator or a person with authority to bind the corporation that owns or operates the facility or covered vessel;	Figure 1-6
(c) Commits to execution of the plan, including any incorporated contingency plans, by the owner or operator of the facility or covered vessel, and verifies authority for the plan holder to make appropriate expenditures in order to execute plan provisions; and	Figure 1-6
(d) Includes:	Figure 1-6
(A) In the case of a facility, the name, location including latitude, longitude and river mile, and address of the facility, type of facility, starting date of operations, types of oils (see definition of oil) handled, volume of oil stored and maximum volume of oil capable of being stored.	N/A
(B) In the case of a covered vessel, the vessel's name, the name, location and address of the owner or operator, official identification code or call sign, country of registry, common ports of call in Oregon, type of oils (see definition of oil) handled, volume of oil transported as fuel and expected period of operation in state waters.	N/A
(C) In the case of a covered vessel enrolled in a cooperative or maritime association plan, the vessel may provide evidence of coverage in lieu of paragraph (B) of this subsection.	N/A
(2) Amendments. Each plan must include a log sheet to record amendments to the plan. The log sheet must be placed at the front of the plan. The log sheet must provide for a record of the section amended, the date that the old section was replaced with the amended section, verification that the Department was notified of the amendment pursuant to OAR 340-141-0220(3) and the initials of the individual making the change. A description of the amendment and its purpose must also be included in the log sheet, or filed in the form of an amendment letter immediately after the log sheet.	Record of Amendments
(3) Table of Contents. Each plan must include a detailed table of contents based on chapter, section, appendix numbers and titles and tables and figures. If the plan is an integrated plan used to also satisfy USCG and USEPA requirements, a cross reference must be included.	Table of Contents
(4) Purpose and Scope. Each plan must describe the purpose and scope of that plan, including:	Section 1.1
(a) The region of operation covered by the plan;	Figure 1-2
(b) The onshore facility, offshore facility or covered vessel operations covered by the plan; and	Figure 1-2
(c) The size and type of the average most probable spill and the worst case spill from the facility or covered vessel.	Appendix C.5, Appendix C.7

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(5) Updates. Each plan must describe the events or time periods that will trigger updates of the plan.	Section 1.2
(6) Implementation Strategy. Each plan must present a strategy for ensuring use of the plan for spill response and cleanup operations as required by OAR 340-141-0210.	Figure 1-1, Section 1.2
(7) Spill Response System. Each plan must describe the organization of the spill response system, including all task assignments anticipated by the end of the first full operational period, or necessary to manage the resources required by the 12 hour planning standard, given a response to an Average Most Probable Discharge. Plans must use a National Incident Management System (NIMS) incident management system, as described in the Northwest Area Contingency Plan (NWACP).	Section 4, Section 2.1, Section 5.4.6
(8) Contractor Identification. Each plan must identify the primary response contractor and subcontractors (except equipment rentals or supply vendors) whose services are bound to the plan by a contract or other approved means:	Figure 3.1-4, Appendix B
(a) If a plan holder is a member of an oil spill response cooperative and relies on that cooperative to perform or supplement its response operations within the regions of operations covered by the plan, the plan must state the cooperative's name, address, phone number and response capability. The plan must also include proof of cooperative membership; or	Appendix B, Figure 3.1-4, Figure 7.1-1
(b) If a plan holder is not a member of an oil spill response cooperative, for each contractor, the plan must state that contractor's 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 contractor, the plan must include a letter of intent signed by the contractor which indicates the contractor's commitment to respond within the specified time period, with personnel and equipment listed in (12) and (13) of this section. Copies of written contracts or agreements with contractors must be available for inspection, if requested by the Department.	Appendix B, Figure 3.1-4, Figure 7.1-1
(9) Relationship to Other Plans. Each plan must briefly describe its relation to all applicable local, state, regional and federal government spill response plans. The plan must describe how the plan holder's response organization will be integrated into the Northwest Area Contingency Plan.	Section 1.4
(10) Spill Detection. Each plan must list procedures that will be used to detect and document the presence and size of a spill, including methods which are effective during low visibility conditions. The plan must also describe the use of mechanical or electronic monitoring or alarm systems (including threshold sensitivities) used to detect oil discharges into adjacent land or water from tanks, pipes, manifolds and other transfer or storage equipment.	Section 2.1, Appendix C.3
(11) Notifications. Each plan must describe procedures that will be taken to immediately notify appropriate parties that a spill has occurred.	Section 3, Figure 2-1
(a) The plan holder must maintain a notification call out list that must be available for inspection upon the request of the Department, and that:	Figure 3.1-3, Figure 3.1-4

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(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 1-2, Figure 3.1-3
(B) Lists the name and phone number of all government agencies that must be notified in the event of an oil spill pursuant to requirements under ORS 466.635; and	Figure 3.1-4
(C) Establishes a clear order of priority for immediate notifications.	Figure 3.1-1
(b) The plan must identify a central reporting office or individual who is responsible for implementing the call out process.	Section 3
(12) Response Personnel. Each plan must describe the personnel, including contract personnel available, to respond to an oil spill, including:	Figure 3.1-3, Figure 3.1-4, Section 4
(a) A job description for each type of spill response position needed as indicated in the spill response organization scheme addressed in section (7) of this rule, or a reference to a recognized NIMS position;	Section 4
(b) The number of personnel available to perform the duties of each type of spill response position;	Figure 3.1-3, Figure 4.6-3
(A) This number must be equal to or greater than the number of persons necessary to sustain a response to the worst case spill defined in the plan.	Section 7.1, Appendix B, Figure 3.1-3, Appendix C.5
(B) If 24 hour operations are expected, the number of persons available to staff the ICS must be multiplied by the proposed number of operational periods (shifts).	Figure 3.1-3, Figure 4.6-3
(c) Arrangements for pre-positioning personnel at strategic locations that will meet criteria pursuant to OAR 340-141-0190(3)(d); and	Section 6.9, Appendix C.5
(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.	Appendix A.2
(13) Equipment and spill response resources. Each plan must describe equipment and spill resources as follows:	Section 1.2
(a) Each plan must list all resident equipment and resident dedicated response vessels used for oil containment, recovery, removal, shoreline and adjacent lands cleanup and wildlife rescue and rehabilitation. Each plan must also list all relied upon communication tools. The Department will accept information about equipment by reference if the equipment is being provided through a primary response contractor as part of the plan. The Department may request information about the condition and date of manufacture of any listed and referenced equipment to further evaluate its applicability to the planning standards or a response.	Section 7.1.1, Figure 7.1.1, Section 7.1.6, Appendix B
(b) For resident equipment and vessels listed under subsection (a) of this section that are not owned by or available exclusively to the plan holder, the plan must also estimate the extent that other contingency plans rely on the same equipment.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(c) For all resident oil containment and recovery equipment, the plan also must include equipment make and model, the manufacturer's nameplate capacity of the response equipment, the EDRC (in barrels per day) and applicable design limits (e.g., maximum wave height capability, suitability for inland waters or open ocean).	Section 7.1.1
(d) Based on information described in subsection (c) of this section, the plan must state the maximum amount of oil that could be recovered per 24-hour period with the equipment used as it is designed.	Appendix C.5
(e) For purposes of determining plan adequacy under OAR 340-141-0190, and to assess realistic capabilities based on potential limitations by weather, sea state, and other variables, the Department will use the data presented in subsections (c) and (d) of this section to apply a higher efficiency factor for equipment listed in a plan if that plan holder provides adequate evidence that the higher efficiency factor is warranted for particular equipment or if the United States Coast Guard has approved a higher efficiency rating.	Section 7.1.1, Figure 7.1-1, Appendix B
(f) The plan must provide arrangements for pre-positioning of oil spill response equipment at strategic locations that will meet response time criteria pursuant to OAR 340-141-0190(3)(d).	Section 6.9, Appendix B, Appendix C.5
(g) When calculating the delivery time of equipment to a spill staging area, the plan must use travel speeds consistent with federal speed predictions for the equipment being moved.	Section 1.2
(14) Communications. Each plan must describe the communication systems used for spill notification and response operations, including:	Section 7.1.6
(a) Communication procedures that identify who will be responsible for the function, to whom and from whom communication will be established and any special instructions;	Section 3.1; Section 7.1.6 Section 1.2
(b) The communication function (e.g., ground-to-air) assigned to each channel or frequency used;	Section 5.4.7
(c) The maximum geographic range for each type of communications equipment used; and	Section 7.1.1, Section 7.1.6
(d) The communication system compatibility with key spill response agencies.	Section 7.1.6
(15) Response Operation Sites. Each plan must describe the process used by the plan holder to establish sites needed for spill response operations, including location or location selection criteria for an incident command post, a communications center if located away from the command post and equipment and personnel staging areas.	Section 7.1.4, Section 7.1.5, Section 7.1.6
(16) Response Flow Chart or Timeline. Each plan must describe the response process by:	Section 1.2
(a) Presenting 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 must describe the general order and priority in which key spill response activities are performed; and	Figure 2-1, Figure 3.1-1

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(b) Describing all key spill response operations in checklist forms, to be used by spill response managers in the event of an oil spill.	Section 2
(17) Authorities. Each plan must describe responsible authorities by:	Section 1.2
(a) Listing the local, state and other government authorities responsible for the emergency procedures peripheral to spill containment and cleanup; and	Figure 3.1-4
(b) Describing the plan holder's role in these emergency operation procedures before the proper authorities arrive, including but not limited to, control of fires and explosions, rescue activities, access restriction to the spill impact area and site security.	Section 2
(18) Damage Control. Each plan must describe equipment and procedures to be used by the facility or covered vessel personnel to minimize the magnitude of the spill and minimize structural damage that could increase the quantity of oil spilled.	Section 2.1.1
(a) For facilities, damage control procedures must include methods to slow or stop pipeline, storage tank, and other leaks, and methods to achieve immediate emergency shutdown.	Figure 2.1-2
(b) For tank vessels, damage control procedures must include methods and onboard equipment to achieve vessel stability and prevent further vessel damage, slow or stop pipe, tank, and other leaks and achieve emergency shutdown during oil transfer.	N/A
(c) For other covered vessels, damage control procedures must address methods to achieve vessel stability and slow or stop leaks from fuel tanks and lines.	N/A
(19) Containment. Each plan must describe, in detail, any nonstandard methods specific to the plan to contain spilled oil and recover it from the environment. When a plan calls for the use of methods that have not been expressly approved by the Department, the description of the proposed options must include:	Section 6
(a) The surveillance methods expected to be used to detect and track the extent and movement of the spill; and	Section 2.1.2
(b) A description of methods to be used to contain and remove oil that will be effective for environmentally sensitive locations included in the Zone, or Zones, for which the plan is written.	Section 6
(20) Response Time. Each plan must briefly describe initial equipment and personnel deployment activities that will accomplish the response standard listed in OAR 340-141-0190(e)(d) and provide:	Section 1.2
(a) An estimate of the actual execution time;	Figure 3.1-3, Figure 7.1-1
(b) The specific location in the Zone where the resident required response equipment is stored; and	Section 7.1.1; Appendix B
(c) The source and management of personnel to deploy the initial response equipment.	Figure 2-1; Figure 3.1-3; Section 4
(21) Chemical Agents. If the plan holder proposes to use dispersants, coagulants, bioremediants or other chemical agents for response operations under certain conditions, the plan must describe:	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(a) Type and toxicity of chemicals, supplemented with material safety data sheets (MSDS) for each product;	Section 6.4, Appendix C.8
(b) The conditions under which the chemicals will be applied, in conformance with all applicable local, state and federal requirements, including the Northwest Area Contingency plan and OAR 340-141-0020;	Section 6.3, Section 6.4
(c) Methods of deployment; and	Section 6.3, Section 6.4
(d) Location and accessibility of supplies and deployment equipment.	Section 7.1, Appendix B
(22) In Situ-Burning. If the plan holder proposes to use in-situ burning for response operations, the plan must describe:	Section 1.2
(a) Type of burning operations;	Section 6.4.3
(b) Conditions under which burning will be applied in conformance with all applicable local, state and federal requirements, including the Northwest Area Contingency plan and OAR 340-264-0030 to 0040;	Section 6.4.3
(c) Methods of application; and	Section 6.4.3
(d) Location and accessibility of supplies and deployment equipment.	Section 7.1, Appendix B
(23) Environmental Protection. Each plan must describe how environmental protection will be achieved, including:	Section 1.2
(a) Protection of sensitive shoreline and island habitat by diverting or blocking oil movement;	Section 6.2, Section 6.3
(b) Priorities for sensitive area protection in the region of operation covered by the plan as provided in a Geographic Response Strategy of the Northwest Area Contingency Plan, or designated by the Department;	Section 6
(c) Rescue and rehabilitation of birds, marine mammals and other wildlife contaminated or otherwise affected by the oil spill; and	Section 6.5
(d) Measures taken to reduce damages to the environment caused by shoreline and adjacent land cleanup operations.	Section 6.3
(24) Interim Storage. Each plan that has identified that oil will be recovered must plan for the storage of the oil and combined oily waste material potentially created.	Section 7.3.1, Figure 7.3-5
(a) Each plan must 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 must be designed to prevent contamination of the storage area by recovered oil and oily wastes.	Section 7.3.1, Figure 7.3-5
(b) If use of interim storage sites will require approval by local, state or federal officials, the plan must include information that 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 5.7
(c) Interim storage and permanent disposal methods and sites must be sufficient to sustain support for oil recovery operations and manage the entire volume of oil recovered and oily wastes generated.	Section 7.3

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(d) Interim storage and permanent disposal methods and sites must comply with all applicable local, state and federal requirements.	Section 5.7, Section 7.3
(25) Health and Safety. Each plan must describe procedures to protect the health and safety of oil spill response workers, and other individuals on-site. Provisions for training, decontamination facilities, safety gear and a safety officer position must be addressed.	Section 5.5
(26) Post Spill Review. Each plan must explain post-spill review procedures, including methods to review both the effectiveness of the plan and the need for plan amendments. Post-spill procedures must provide for a debriefing with the Department that will include any newly recognized need to amend the plan and list of any other lessons learned.	Section 8
(27) Drills and Exercises. All approved plans must be verified by drills and exercises. Each plan must describe the schedule and type of drills and other exercises that will be practiced to ensure readiness of the plan elements, including drills that satisfy OAR 340-141-0200 (3).	Appendix A
(a) The plan holder must test and document internal call out procedures at least once every 90 calendar days. The plan holder must retain records of these drills for at least three years and make them available for Department review upon request.	Figure A.1-2
(b) The plan holder must notify the Department of drills and exercises, at least 60 days before full deployment and tabletop drills, and 10 days prior to equipment exercises. Prior notice to the Department is not required before notification drills and internal phone number verification exercises.	Section 1.2
(c) The plan holder must send post drill reports for all tabletop exercises or deployment drills to the Department no later than 60 days after the completion of the drill or exercise. The executive summary from a National Preparedness for Response Exercise Program (N-PREP) report may be submitted to meet this requirement when the exercise has been designed by the N-PREP staff.	Section 1.2
(28) Risk Variables. Each plan must list the spill risk variables within the region of operation covered by the plan, including:	Section 1.2
(a) Each plan for a facility must list the following:	Section 1.2
(A) Types, physical properties and amounts of oil handled;	Figure 1-2, Appendix C.7, Appendix C.8
(B) A written description and map indicating site topography, stormwater and other drainage systems, mooring areas, pipelines, tanks, and other oil processing, storage and transfer sites and operations;	Figure 1-2, Figure 1-4, Section 6.8
(C) A written description of sites or operations with a history of or high potential for oil spills, including key areas that pose significant navigation risk within the region of operation covered by the plan; and	Section D.2.1, FIGURE D.2-2
(D) Methods to reduce spills during transfer operations, including overfill prevention.	Appendix C.3
(b) Each plan for a covered vessel must list the following:	N/A
(A) Types, physical properties and amounts of oil handled;	N/A
(B) A written description and diagram showing cargo, fuel and ballast tanks; and piping, power plants and other oil storage and transfer sites and operations; and	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(C) A written description of operations with a history of or high potential for oil spills, including key areas that pose significant navigation risks within the region of operation covered by the plan.	N/A
(29) Environmental Variables. Each plan must list the environmental variables within the region of operation covered by the plan. Facility plans required to include river or coastal areas must identify the environmental variables from the probable point of release to the point the oil could travel in 24 hours in a current of four knots. Vessel contingency plans must encompass the entire length of the Oregon waterway in the Zone or sub-Zone entered. All plans must describe:	Section 6.7, Section 6.8
(a) Natural resources, including 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;	Section 6.6, Section 6.7
(b) Public resources, including public beaches, water intakes, drinking water supplies and marinas;	Section 6.7
(c) Seasonal hydrographic and climatic conditions; and	Section 6.1.1
(d) Physical geographic features, including relative isolation of coastal regions, beach types, and other geological characteristics. Plans may reference numbered Geographic Response Plan strategies (GRPs) in the Northwest Area Contingency Plan when identifying individual environmental features.	Section 6.1, Section 6.1.2
(30) Logistical Resources. Each plan must list the logistical resources within the region of operation covered by the plan, including facilities for fire services, medical services and accommodations; and shoreline access areas, including boat launches.	Figure 3.1-4; Section 6.9
(31) Response Strategy Outline. Each plan must include a statement of the intended response activities. This statement must describe how the plan resources must be applied to adequately respond during the initial phase of the response to an average most probable and worst case spill, release or discharge. The Response Strategy Outline must begin with a description of the situation to be managed, and must describe:	Appendix C.5
(a) Deployment of resources and estimates of response times;	Appendix C.5
(b) The intended result of the activity for each person listed in section (7) and (12) of this section;	Appendix C.5
(c) Command and control arrangements;	Appendix C.5
(d) Required coordination; and	Appendix C.5
(e) Probable obstacles and an estimate of oil movement during the first 72 hours.	Appendix C.4; Appendix C.5; Appendix C.7
(32) Financial Responsibility. Each plan must provide evidence that the facility or vessel is in compliance with federal financial responsibility requirements pursuant to ORS 468B.390.	Section 7.5, Figure 7.5-1

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0140), CONTINUED	LOCATION
(33) Technical Terms Glossary. Each plan must include a glossary of technical terms and abbreviations used in the plan.	Appendix F
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150)	**LOCATION**
Oil Spill Contingency Planning Standards	
(1) The purpose of this rule is to establish oil spill prevention and emergency response contingency planning standards for onshore and offshore facilities, pipelines and vessels that will, when followed:	Section 1.2
(a) Promote the prevention of oil spills;	Section 1.2
(b) Promote a consistent west coast approach to oil spill prevention and response;	Section 1.2
(c) Maximize the effectiveness and timeliness of oil spill response by responsible parties and response contractors;	Section 1.2
(d) Ensure readiness of equipment and personnel;	Section 1.2
(e) Support coordination with state, federal and other contingency plans in particular the state plan required under ORS 468B.495 - 468B.500; and	Section 1.2
(f) Protect Oregon waters and other natural resources from the impacts of oil spills.	Section 1.2
(2) A plan that conforms to the Department's planning standards, or alternative planning standard approved or required by the Department as provided in subsection (2)(a) and (2)(b), may be approved if all other planning requirements in this Division are met:	Section 1.2
(a) Plans submitted that are based on standards that differ from the Department's planning standards must be supported by a detailed analysis that fully supports the methodology proposed. Alternative planning standards proposed by a plan submitter must be consistent with regional goals, be defended by the plan writer during public review of the plan and be approved by the Department.	Section 1.2
(b) The Department will apply the applicable planning standard when evaluating the adequacy of a plan submitted to the Department for approval, unless the planning standards do not fully reflect the unique circumstances of a particular facility or vessel. If the Department determines that the plan does not fully protect the environment despite compliance with the general planning standards, the Department will provide a detailed written explanation of its decision outlining the basis for its decision and the specific changes needed in the submitted plan.	Section 1.2
(a) Facilities located in a sub-Zone of the Columbia River must meet the following planning standards, except as provided in subsections (g) and (h) of this section:	Section 1.2
(A) By 1 hour after the discovery of a spill, the facility must have deployed containment boom around the spill source. The length of boom on hand for this purpose must be at least four times the length of the largest vessel, or combined vessel lengths, potentially at that facility. The boom must be placed in the water in a location and fashion so as to contain and facilitate recovery of the greatest amount of oil from the water.	Appendix C.5

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(B) By 2 hours after the discovery of a spill, responders listed in the plan must be prepared to participate in an initial assessment of the release. The amount of boom deployed and available in reserve to be deployed, if needed, must be eight times the length of the largest vessel, or combined vessel lengths, potentially at that facility.	Appendix C.5
(C) By 6 hours after the discovery of a spill, the facility must arrange for recovery of spilled oil. There must be equipment and personnel on site with the ability to recover the lesser of 12,000 barrels of oil or an amount of oil equal to 10 percent of the facility's worst case spill from the water in the next 24 hours.	Appendix C.5
(D) By 12 hours after the discovery of a spill, the facility must have 35,000 feet of boom deployed or available at the designated staging area for equipment deployment. Facilities handling only nonpersistent oils need to have 15,000 feet of boom at this time. All facilities must have the ability at or before this time to recover the lesser of 36,000 barrels of oil or 15 percent of the worst case spill volume from the water in the next 24 hours. Facilities must have the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	Appendix C.5
(E) By 24 hours after the discovery of a spill, the facility must have in place equipment and personnel with the ability to recover oil from the water to the lesser of 48,000 barrels of oil or 20 percent of the worst case spill volume in the next 24 hours.	Appendix C.5
(F) By 48 hours after the discovery of a spill, the facility must have in place equipment and personnel with the ability to recover oil from the water to the lesser of 60,000 barrels of oil or 25 percent of the worst case spill volume in the next 24 hours.	Appendix C.5
(b) Facilities located in the Coastal Bays Zone must meet the following planning standards:	Section 1.2
(A) By 1 hour after the discovery of a spill, the facility must have deployed containment boom around the spill source. The length of boom on hand for this purpose must be at least four times the length of the largest vessel, or combined vessel lengths, potentially at that facility. The boom must be placed in the water in a location and fashion so as to contain and facilitate recovery of the greatest amount of oil from the water.	Appendix C.5
(B) By 2 hours after the discovery of a spill, responders listed in the plan must be prepared to participate in an initial assessment of the release. The amount of boom deployed and available in reserve to be deployed if needed must be eight times the length of the largest vessel, or combined vessel lengths, potentially at that facility.	Appendix C.5
(C) By 6 hours after the discovery of a spill, the facility must arrange for recovery of spilled oil. There must be equipment and personnel on site with the ability to recover the lesser of 12,000 barrels of oil or an amount of oil equal to 10 percent of the facility's worst case spill from the water in the next 24 hours.	Appendix C.5

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(D) By 12 hours after the discovery of a spill, the facility must have 35,000 feet of boom deployed or available at the designated staging area for equipment deployment. Facilities handling only nonpersistent oils need to have 10,000 feet of boom at this time. All facilities must have the ability to recover oil at or before this time and have in place equipment and personnel with the ability to recover the lesser of 36,000 barrels of oil or 15 percent of the worst case spill volume from the water in the next 24 hours. Facilities must have the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	Appendix C.5
(E) By 24 hours after the discovery of a spill, the facility must have deployed or have at the designated staging area for equipment deployment an amount of boom equal to 35,000 feet. Facilities handling only nonpersistent oils need to have 15,000 feet of boom at this time. All facilities must have in place equipment and personnel with the ability to recover from the water the lesser of 48,000 barrels of oil or 20 percent of the worst case spill volume in the next 24 hours.	Appendix C.5
(F) By 48 hours after the discovery of a spill, the facility must have the ability to recover oil from the water to the lesser of 60,000 barrels of oil or 25 percent of the worst case spill volume in the next 24 hours.	Appendix C.5
(c) Offshore facilities located in the Open Ocean Zone;	N/A
(A) By 1 hour after the discovery of a spill, the offshore facility must have begun deploying the open ocean rated boom required to be at the facility. This must be an amount of boom equal to the full perimeter of the offshore facility plus the length of the largest vessel or barge, or combined vessel lengths, moored at the offshore facility.	N/A
(B) By 6 hours after the discovery of a spill, responders listed in the plan must be prepared to participate in an initial assessment of the release. The offshore facility must also have the ability to begin recovering oil so an amount equal to 10 percent of the worst case spill volume can be recovered in the next 24 hours and stored on site.	N/A
(C) By 12 hours after the discovery of a spill, the offshore facility must have the ability to deploy protective boom at all sensitive coastal locations within 25 miles of the offshore facility. Facilities must have the ability to recover the lesser of 36,000 barrels of oil or 15 percent of the worst case spill volume from the water in the next 24 hours. Facilities must have the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	N/A
(D) By 24 hours after the discovery of a spill, the offshore facility must have the ability to recover oil from the water to the lesser of 48,000 barrels of oil or 20 percent of the worst case spill volume in the next 24 hours.	N/A
(E) By 48 hours after the discovery of a spill, the offshore facility must have the ability to establish shoreline cleanup resources and wildlife rescue services. The facility must have the ability to recover oil from the water to the lesser of 60,000 barrels of oil or 25 percent of the worst case spill volume in the next 24 hours.	N/A
(d) Covered vessels operating in any sub-Zone of the Columbia River must meet the following planning standards:	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(A) By 2 hours after the discovery of a spill, the responders listed in the operator's plan must be prepared to participate in an initial assessment of the release. Responders listed in the plan must have initiated deployment of containment boom around the source except in the case of passenger vessels, and vessels at risk of exacerbating the situation, where a deflection deployment for safety reasons may be used. The amount of boom being deployed must be the lesser of 1000 feet, or a length equal to four times the length of the vessel. The boom must be placed in the water in a location and fashion so as to safely contain and facilitate recovery of the greatest amount of oil from the water. Additional boom must be available at the staging area equal to the balance of four times the length of the vessel if the vessel is more than 250 feet in length. In all cases the plan must include, by contract or other approved means, a boat crew capable of deploying and tending the required boom to be operating on site at this time.	N/A
(B) By 6 hours after the discovery of a spill, the vessel operator must have arranged for recovery of spilled oil. There must be equipment and personnel available to be on site at this time with the ability to recover the lesser of 12,000 barrels of oil, or an amount of oil equal to two percent of the vessel's worst case spill, from the water in the next 24 hours. The vessel plan must also provide for the delivery of 10,000 feet of containment boom.	N/A
(C) By 12 hours after the discovery of a spill, the vessel operator must have the ability to deploy 40,000 feet of boom. There must be a recovery system capable of removing the lesser of 36,000 barrels of oil or five percent of the worst case spill volume from the water in the next 24 hours. Plans must include the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	N/A
(D) By 24 hours after the discovery of a spill, the vessel operator must have deployed, or have at the designated staging area for equipment deployment, equipment and operators with the ability to recover the lesser of 48,000 barrels of oil or 12 percent of the worst case spill volume from the water in the next 24 hours.	N/A
(E) By 48 hours after the discovery of a spill, the vessel operator must be able to arrange for an increased ability to recover oil from the water to the lesser of 60,000 barrels of oil or 17 percent of the worst case spill in the next 24 hours.	N/A
(e) Covered vessels operating in the Coastal Bays Zone must meet the following planning standards:	N/A
(A) By 2 hours after the discovery of a spill, the responders listed in the plan must be prepared to participate in an initial assessment of the release. Responders listed in the plan must have initiated deployment of containment boom around the source, or in the case of passenger vessels a deflection deployment for safety reasons. The amount of boom being deployed must be the lesser of 1,000 feet, or a length equal to four times the length of the vessel. The boom must be placed in the water in a location and fashion so as to contain and facilitate recovery of the greatest amount of oil from the water. Additional boom must be available at the staging area equal to the balance of four times the length of the vessel if the vessel is more than 250 feet in length. In all cases the plan must include, by contract or other approved means, a boat crew capable of deploying and tending the required boom to be operating on site at this time.	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(B) By 6 hours after the discovery of a spill, the vessel operator must have arranged for recovery of spilled oil. There must be equipment and personnel on site at this time with the ability to recover the lesser of 12,000 barrels of oil or an amount of oil equal to two percent of the vessel's worst case spill from the water in the next 24 hours. The vessel plan must also have provided for the delivery to the site of 6,500 feet of containment boom.	N/A
(C) By 12 hours after the discovery of a spill, the vessel operator must have the ability to deploy 9,500 feet of boom. There must be a recovery system on site capable of removing the lesser of 36,000 barrels of oil or five percent of the worst case spill volume from the water in the next 24 hours. Vessels must have the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	N/A
(D) By 24 hours after the discovery of a spill, the vessel operator must have 14,000 feet of boom deployed, or at the designated staging area for equipment deployment, and equipment and operators with the ability to recover the lesser of 48,000 barrels of oil or 12 percent of the worst case spill volume from the water in the next 24 hours.	N/A
(E) By 48 hours after the discovery of a spill, the vessel operator must be able to arrange to recover oil from the water to the lesser of 60,000 barrels of oil or 17 percent of the worst case spill volume in the next 24 hours.	N/A
(f) Covered vessels operating in the Open Ocean Zone:	N/A
(A) By 2 hours after the discovery of a spill, the responders listed in the plan must mobilize personnel, prepare to conduct an initial site assessment and site safety characterization of the spill area and arrange for aircraft for aerial observations. Transport of appropriate boom must take place in preparation for deployment at the source. In the case of passenger vessels, booming strategies must take into account the safety of passengers. Amount of boom must be the lesser of 1,000 feet, or a length equal to four times the length of the vessel. Booming strategies must maximize containment and facilitate recovery of the greatest amount of oil from the water. Additional boom must be available at the response resource staging area equal to the balance of four times the length of the vessel if the vessel is more than 250 feet in length. In all cases, the plan must have listed by contract or other approved means qualified personnel to accomplish the requirements of this paragraph.	N/A
(B) By 6 hours after the discovery of a spill, the vessel operator must have arranged for recovery of spilled oil. There must be equipment and personnel on site capable of recovering the lesser of 12,000 barrels of oil from the water or an amount of oil equal to two percent of the vessel's worst case spill in the next 24 hours. The vessel plan must also have provided for the delivery to the site of 10,000 feet of containment boom.	N/A
(C) By 12 hours after the discovery of a spill, the vessel operator must have the ability to deploy 40,000 feet of boom. There must be on site a recovery system capable of removing from the water the lesser of 36,000 barrels of oil or three percent of the worst case spill volume in the next 24 hours. Vessel operators must have the ability to assess the impact of a spill on wildlife. Responders listed in the plan must have the ability to identify shoreline impacts.	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(D) By 24 hours after the discovery of a spill, the vessel operator must have deployed, or have at the designated staging area for equipment deployment, equipment and operators with the ability to recover the lesser of 48,000 barrels of oil or 12 percent of the worst case spill volume from the water in the next 24 hours.	N/A
(E) By 48 hours after the discovery of a spill, the vessel operator must be able to arrange to recover oil from the water to the lesser of 60,000 barrels of oil or 17 percent of the worst case spill volume in the next 24 hours.	N/A
(g) Pipelines located in, or crossing, a planning Zone where there is a potential for spilling or releasing oil to navigable waters of the state must meet the following planning standards:	Section 1.2
(A) By 1 hour after the discovery of a spill, the pipeline operator must completely shutdown the pipeline.	Figure 2.1-1, Figure 2.1-2, Appendix C.5
(B) By 2 hours after the discovery of a spill, the pipeline operator or its dedicated response contractor must have deployed 1,000 feet of containment boom around the spill source entering the water. The boom must be placed in the water in a location and fashion so as to contain and facilitate recovery of the greatest amount of oil from the water.	Appendix C.5
(C) By 6 hours after the discovery of a spill, the pipeline operator must have arranged for recovery of spilled oil. There must be equipment and personnel on site capable of recovering the lesser of 12,000 barrels of oil or an amount of oil equal to 10 percent of the pipeline's worst case spill from the water in the next 24 hours.	Appendix C.5
(D) By 12 hours after the discovery of a spill, the pipeline operator must have 15,000 feet of boom deployed or at the designated staging area for equipment deployment. All pipelines must have the ability to recover oil at or before this time and have in place equipment and personnel with the ability to recover the lesser of 36,000 barrels of oil or 15 percent of the worst case spill volume from the water in the next 24 hours. The pipeline operator must have the ability to assess the damage potentially done to wildlife and shorelines in the impacted area of the spill.	Appendix C.5
(E) By 24 hours after the discovery of a spill, the pipeline operator must increase the ability to recover oil from the water to the lesser of 48,000 barrels of oil or 20 percent of the worst case spill volume in the next 24 hours. The pipeline operator must have arranged for sufficient boom of an appropriate design to be deployed for the protection of sensitive wildlife habitats within the potential drift of oil in 24 hours.	Appendix C.5
(F) By 48 hours after the discovery of a spill, the pipeline operator must increase the ability to recover oil from the water to the lesser of 60,000 barrels of oil or 25 percent of the worst case spill volume in the next 24 hours. The pipeline operator must have arranged for sufficient boom of an appropriate design to be deployed for the protection of sensitive wildlife habitats within the potential drift of oil in 48 hours.	Appendix C.5

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(h) Pipelines located in, or crossing, the Inland Zone must meet the following planning standards:	Section 1.2
(A) By 1 hour after the discovery of a spill, the pipeline operator must complete a shutdown of the pipeline.	Figure 2.1-1, Figure 2.1-2, Appendix C.5
(B) By 2 hours after the discovery of a spill, the pipeline operator must have assigned personnel and emergency equipment to locate the exact point of release. The pipeline operator must have arranged for the equipment and response personnel necessary to contain the spill.	Figure 2.1-1, Figure 2.1-2, Appendix C.5
(C) By 6 hours after the discovery of a spill, the pipeline operator must have the ability to complete the assessment of the spill. The pipeline operator must have the ability to rapidly get resources to the spill location using preplanned caches of materials where no local resources are resident.	Section 2.1, Appendix C.5
(D) By 12 hours after the discovery of the spill, the pipeline operator must have the ability to recover free standing liquid oil from the environment equal to five percent of the worst case spill in the next 24 hours. The pipeline operator must have the ability to assess and mitigate the damage potentially done to wildlife, wildlife habitat and natural resources in the impacted area of the spill.	Section 6.5, Appendix B, Appendix C.5
(E) By 24 hours after the discovery of a spill, the pipeline operator must have deployed or have at the designated staging area for equipment deployment an amount of equipment capable of removing 10 percent of the worst case spill volume from the land and any impacted water in the next 24 hours.	Appendix C.5
(F) By 48 hours after the discovery of a spill, the pipeline operator must increase the ability to remove oil from the environment to the lesser of 60,000 barrels in the next 24 hours, or 15 percent of the worst case spill volume. The pipeline operator must have arranged for sufficient equipment, of an appropriate design, to be deployed for the protection of sensitive wildlife habitats within the potential spread or travel of the oil in 24 hours.	Appendix C.5
(4) Resources identified in a plan to meet planning standards must include these conditions and qualifications:	Section 1.2
(a) The required resources listed in the plans for facilities, not including transmission pipelines or pipeline terminals, must be the property of the plan holder or specifically available to the plan holder through a contract or other approved means. Those resources required for the first and second hours on the Columbia River must be stocks of materials and labor sources resident within the impacted sub-Zone. To meet the six hour planning standards, the resources on the Columbia River may also be those normally resident in an adjacent sub-Zone. To meet the planning standard on the Columbia River at 12 hours, the materials may be from resources resident in the Zone. Those resources required for the first through the sixth hours in a coastal bay must be stocks of materials and labor sources resident within the impacted Zone. To meet the 12-hour planning standards in Coastal and Inland Zones, the resources may be from an adjacent planning Zone.	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0150), CONTINUED	LOCATION
(b) The required resources listed in a covered vessel plan must be the property of the plan holder, or specifically available to the plan holder through a contract or other approved means. Those resources necessary and available to meet planning standards for the initial response, and through the first two hours on the Columbia River must be stocks of materials and labor sources resident within the impacted sub-Zone. To meet the six hour planning standard, the resources may be from an adjacent sub-Zone. To meet the 12 hour planning standards the resources on the Columbia River must be those normally resident in that Zone. To meet planning standards at two hours and six hours in Coastal Bay Zone, the resources must be resident in the specific bay. To meet planning standards at 12 hours in the Coastal Bay Zone, the resources may be from an adjacent Zone.	N/A
(c) The required resources listed for a pipeline plan must be the property of the plan holder, or specifically available to the plan holder through a contract or other approved means. Those resources required for the first and second hours on the Columbia River must be stocks of materials and labor sources resident within the impacted sub-Zone. To meet the six hour planning standards, the resources on the Columbia River may also be those normally resident in an adjacent sub-Zone. To meet the 12 hour planning standard on the Columbia River, the materials may be from resources resident in the Zone. Those resources required for the first through the sixth hours in a Coastal Bay Zone must be stocks of materials and labor sources resident within the impacted Zone. To meet planning standards at 12 hours in Coastal and Inland Zones, the resources may be from an adjacent planning Zone.	Section 7.1.1, Figure 7.1-1, Appendix B
(5) For all facilities, pipelines and covered vessels subject to planning standards in this rule, if equipment to recover oil from the water is required, the plan must identify interim storage for the recovered oil and oily water. Interim storage qualifications are described in section 0140 (24), the required content of contingency plans section of this rule, and are also addressed in OAR 340-142-0080. The Department will set plan specific interim storage planning standards, or apply a default interim storage capacity equal to three times the effective daily recovery capacity (EDRC) of the equipment used to achieve the recovery percentages or volumes given in the planning standards of section (3). EDRC is used in planning standards to adjust the total recovery ability of a particular piece of oil spill recovery equipment to a lower value compensating for any incidental water it may recover. Unless otherwise approved by the Department the nameplate efficiency for a piece of equipment will be derated to 20 percent of its manufacturer's claim. Requirements for the 6 to 12 hour planning standards must show how the plan will meet the need for interim storage.	Figure 7.3-5

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0160)	LOCATION
Prevention Strategies for Facilities	
(1) The owner or operator of each onshore and offshore facility must develop spill prevention strategies that will, when implemented, provide the best achievable protection from damages caused by the discharge of oil into the waters of the state. The strategies may be in the form of:	Appendix C.3
(a) Appendices to oil spill prevention and emergency response plans required under this chapter; or	Appendix C.3
(b) A stand alone prevention plan that meets all requirements of OAR 340-141-0100 to 340-141-0230.	N/A
(2) Spill Prevention Countermeasure and Control Plans (SPCC), Operation Manuals and other prevention documents prepared to meet federal requirements under 33 CFR 154, 33 CFR 156, 40 CFR 109, 40 CFR 112, or the Federal Oil Pollution Act of 1990 or plans prepared to meet the requirements of other states may be submitted to satisfy requirements under this chapter if the Department deems that such requirements equal or exceed those of the Department, or if the plans are modified or appended to satisfy requirements of this Division.	Section 1.2
(3) Spill prevention strategies must at a minimum provide all of the following:	Section 1.2
(a) Documentation of types and frequency of spill prevention training provided to applicable personnel;	Appendix A.2
(b) Evidence that the facility has an operations manual;	Section 1.2
(c) A description of a drug and alcohol awareness program that provides training and information materials to all employees on recognition of alcohol and drug abuse treatment opportunities, and applicable company policies;	Appendix A.3
(d) Evidence of a maintenance and inspection program that includes:	Section 1.2
(A) Summary of the frequency and type of all regularly scheduled inspection and preventative maintenance procedures for tanks, pipelines, key storage, transfer, or production equipment including associated pumps, valves, and flanges, and overpressure safety devices and other spill prevention equipment;	Appendix C.3
(B) Description of integrity testing of storage tanks and pipelines using such techniques as hydrostatic testing and visual inspection, including but not limited to the frequency of tests, means of identifying that a leak has occurred and measures to reduce spill risk if test material is product;	Appendix C.3
(C) External and internal corrosion detection and repair;	Appendix C.3
(D) Damage criteria for equipment repair or replacement;	Section 7.1.2
(E) Maintenance and inspection records of the storage and transfer facilities and related equipment will be made available to the Department upon request; and	Section 7.1.2
(F) Documentation required under 40 CFR 112.7(e) or 33 CFR 154, Subparts C and D may be used to address elements of this subsection.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0160), CONTINUED	LOCATION
(e) A description of the use of containment boom at facilities transferring persistent oil, including:	Section 1.2
(A) Type(s) of boom used based upon the varied conditions within the region(s) of operation; and	Section 6.2
(B) Methods of boom placement and anchoring.	Section 6.2
(f) Identification of spill prevention technology currently in use, including if applicable:	Appendix C.3
(A) Tank and pipeline materials and design;	Appendix C.3
(B) Storage tank overflow alarms, tank overflow cutoff switches, low level alarms and automatic transfer shutdown systems, including methods to alert operators, system accuracy and tank fill margin remaining at time of alarm activation before overflow would occur at maximum pumping rate (documentation required under 40 CFR 112.7(e)(2)(viii) or 33 CFR 154.310(a) (12-13) may be used to address some or all of these elements);	Figure 7.2-2, Appendix C.3
(C) Leak detection systems for both active and nonactive pipeline conditions including detection thresholds in terms of duration and percentage of pipeline flow limitations on system performance due to normal pipeline events, and procedures for operator response to leak alarms (documentation required under 40 CFR 112.7(e)(3) may be used to address some or all of these elements);	Appendix C.3
(D) Rapid pump and valve shutdown procedures, including means of ensuring that surge and overpressure conditions do not occur, rates of valve closure, sequence and time duration (average and maximum) for entire procedure, automatic and remote control capabilities utilized and visual displays of system status for operator use (documentation required under 40 CFR 112.7(e)(3) may be used to address some or all of these elements);	Appendix C.3
(E) Minimization of post-shutdown residual drainout from pipes, including criteria for locating valves, identification of all valves (including types and means of operation) that may be open during a transfer process, and any other techniques for reducing drain out;	Appendix C.3
(F) Means of relieving pressure due to thermal expansion of liquid in pipes during periods of nonuse;	Appendix C.3
(G) Secondary containment, including contents of the largest tank plus space for precipitation, and material design and permeability of the containment area (documentation required under 40 CFR 112.7(e)(1) and (2)(ii) - (iv) may be used to address some or all of these elements);	Appendix C.3
(H) Surge control systems;	Appendix C.3
(I) Internal and external corrosion control coatings or wrappings and instruments;	Appendix C.3
(J) Storm water and other drainage retention, treatment and discharge systems, including maximum storage capacities and identification of any applicable discharge permits (documentation required under 40 CFR 112.7(e)(1) and (2)(iii) and (ix) may be used to address some or all of these elements); and	Appendix C.3

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0160), CONTINUED	LOCATION
(K) Criteria for suspension of operations while leak detection or other spill control systems are inoperative.	Appendix C.3
(g) A description of facility site security systems, including:	Section 1.2
(A) Procedures for controlling and monitoring facility access;	Figure 7.2-2
(B) Lighting (documentation required under 33 CFR 154.570 may be used to address some or all of this element);	Figure 7.2-2
(C) Signage; and	Figure 7.2-2
(D) Right-of-way identification or other measures to prevent third party damage (documentation required under 40 CFR 122.7(e)(3)(v) and (9) may be used to address some or all of this element).	Figure 7.2-2
(h) History of any discharges of oil to the land or waters of the state in excess of 25 barrels (1,050 gallons) which occurred during the five-year period prior to the plan submittal date. For each discharge, describe:	FIGURE D.2-2
(A) Quantity;	FIGURE D.2-2
(B) Type of oil;	FIGURE D.2-2
(C) Geographic area;	FIGURE D.2-2
(D) Analysis of cause, including source(s) of discharged oil and contributing factors (e.g., equipment failure, employee error, adverse weather, etc.); and	FIGURE D.2-2
(E) Measures taken to remedy the cause and prevent reoccurrence.	FIGURE D.2-2
(i) A detailed and comprehensive site risk analysis that:	Appendix C.2.1, Appendix C.3
(A) Evaluates the construction, age, corrosion, inspection and maintenance, operation and oil spill risk of the transfer, production and storage system including piping, tanks, pumps, valves and associated equipment;	Appendix C.2.1
(B) Evaluates spill minimization and containment systems;	Appendix C.2.1
(C) Incorporates information required in subsection (f) of this section;	Appendix C.2.1, Appendix C.3
(D) Is prepared under the supervision of (and bears the seal of) a licensed professional engineer; and	Appendix F
(E) Includes documentation required under 40 CFR 112.7(b) and (e) may be used to address some or all of the elements in this subsection.	Section 1.2
(j) A description of how the facility will incorporate those measures that will provide best achievable protection to address the spill risks identified in the risk analyses required in subsection (i) of this section. (Information documented pursuant to 40 CFR 112.7(e) and 33 CFR 154.310 may be used to address some or all of the elements of this subsection.)	Appendix C.2.1
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0170)	**LOCATION**
Prevention Strategies for Vessels	
(1) Each covered vessel must have spill prevention strategies that when implemented will provide the best achievable protection from damages caused by the discharge of oil into the waters of the state.	N/A
(2) Prevention documents prepared to meet federal requirements under the Oil Pollution Act of 1990 or plans prepared to meet the requirements of other states may be used to satisfy the criteria of this section.	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0170), CONTINUED	LOCATION
(3) Vessel owners or operators will make maintenance and inspection records, and oil transfer procedures available to the Department upon request.	N/A
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0180)	**LOCATION**
Plan Submittal	
(1) Before operating in Oregon, facilities must submit plans for review as follows:	Section 1.2
(a) Except as provided in (c), plans for facilities must be submitted to the Department at least 90 days before oil is moved into or out of the facility.	Section 1.2
(b) Plans for covered vessels of 300 gross tons or more which transit the Columbia River and Willamette River must be submitted to the Department at least 90 days before that vessel enters navigable waters of the state.	N/A
(c) Plans for existing pipelines in the Inland Zone must be submitted by June 30, 2003. After June 30, 2003 plans for new pipelines must be submitted 90 days before pipeline operations commence.	N/A
(2) One complete copy of the plan (including appendices) must be submitted to the Department in printed or electronic form. Plans must be submitted to: Department of Environmental Quality, Emergency Response Program, 811 SW 6th Ave., Portland, Oregon 97204. Electronic copies must be sent the Department on either standard computer disk or compact disk. A printed copy of the complete plan showing all revisions may be required during the public review period. The plan holder may be required to supply up to four printed copies of the final plan.	Figure 1-1
(3) Onshore and offshore facility plans may be submitted by:	Section 1.2
(a) The facility owner or operator; or	Section 1.2
(b) An oil spill response cooperative or maritime association in which the facility owner or operator is a participating member.	Section 1.2
(4) Tank vessel plans may be submitted by:	N/A
(a) The tank vessel owner or operator;	N/A
(b) The owner or operator of a facility at which the tank vessel unloads cargo, in conformance with requirements under OAR 340-141-0150(1); or	N/A
(c) An oil spill response cooperative or maritime association in which the tank vessel owner or operator is a participating member.	N/A
(5) Cargo and passenger vessel plans may be submitted by:	N/A
(a) The vessel owner or operator;	N/A
(b) The agent for the vessel resident in this state;	N/A
(c) An oil spill response cooperative or maritime association in which the tank vessel owner or operator is a participating member; or	N/A
(d) A primary response contractor.	N/A

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0180), CONTINUED	LOCATION
(6) Subject to the conditions imposed by the Department, the owner, operator, agent or a maritime association may submit a single contingency plan for cargo vessels or passenger vessels of a particular class.	N/A
(7) A single plan may be submitted for more than one facility or covered vessel owned by the same person, provided that the plan contents meet the requirements of OAR 340-141-0100 to 340-141-0230 for each facility, pipeline or covered vessel listed.	Section 1.2
(8) The plan submitter may request that proprietary information be kept confidential under ORS 192.501(2). If a plan submitter wishes to claim that any provision in a plan is a trade secret, the submitter must specifically notify the Department of its claim and identify those provisions in the plan that are claimed to be trade secrets.	N/A
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0190)	**LOCATION**
Plan Review	
(1) Upon receipt of a plan, the Department will promptly evaluate the plan for completeness. If the Department determines that a plan is incomplete, the submitter will be notified of deficiencies. The review period will not begin until the Department receives a complete plan. The Department will allow 30 days for the submitter to supply the missing components of the plan. After 30 days the plan will be returned without approval to the submitter.	Section 1.2
(2) The Department will notify interested persons of any contingency plans under review by the Department, and make such plans available for review to ODFW, DLCD, the State Fire Marshal and any interested person. The Department will provide a 30-day period for agencies and other interested persons to comment on a plan.	Section 1.2
(3) A Plan will be approved if, in addition to meeting criteria in OAR 340-141-0100 through 340-141-0170, it demonstrates that when implemented, it will:	Section 1.2
(a) Provide for prompt and proper response to and cleanup of a variety of spills, including average most probable spills and worst case spills;	Section 1.2
(b) Provide for prompt and proper protection of the environment from oil spills;	Section 1.2
(c) Provide for immediate notification and mobilization of resources upon discovery of a spill; and	Section 1.2
(d) Provide for initial deployment of response equipment and personnel at the site of the spill within one hour of discovery for facilities and two hours of discovery for covered vessels given suitable safety conditions.	Section 1.2
(4) When reviewing plans, the Department will, in addition to the above criteria, consider the following:	Section 1.2
(a) The volume and type of oil(s) addressed by the plan;	Section 1.2
(b) The history and circumstances of prior spills by similar types of facilities, including spill reports by Department spill responders;	Section 1.2
(c) The presence of operating hazards;	Section 1.2
(d) The sensitivity and value of natural resources within the Oil Spill Response Planning Zones and geographic area covered by the plan;	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0190), CONTINUED	LOCATION
(e) Any pertinent local, state, federal agency or public comments received on the plan; and	Section 1.2
(f) The extent that reasonable, cost-effective spill prevention measures have been incorporated into the plan.	Section 1.2
(5) The Department may approve a plan without a full review pursuant to this rule if that plan has been approved by a federal agency or other state using approval criteria that equal or exceed those of the Department.	Section 1.2
(6) The Department will endeavor to notify the facility or covered vessel owner or operator within five working days after the review is completed whether the plan has been approved.	Section 1.2
(7) If the plan is approved, the facility or covered vessel owner or operator will receive a certificate of approval describing the conditions of approval, including an expiration date not to exceed five years.	Section 1.2
(8) The Department may approve a plan conditionally by requiring the owner or operator of a facility or covered vessel owner or operator to operate with specific precautionary measures until unacceptable components of the plan are resubmitted and approved.	Section 1.2
(a) Precautionary measures may include, but are not limited to, placing spill containment boom around all vessels during oil transfers, reducing oil transfer rates, increasing personnel levels, or restricting operations to daylight hours. Precautionary measures may also include additional requirements to ensure availability of response workers and equipment.	Section 1.2
(b) A plan holder will have 30 calendar days after the Department gives notification of conditional status to submit and implement required changes to the Department, with the option for an extension at the Department's discretion. Plan holders who fail to meet conditional requirements or provide required changes in the time allowed will lose conditional approval status.	Section 1.2
(c) The Department may use plan approval with conditions as an alternate to rejecting a plan with minor defects.	Section 1.2
(9) If plan approval is denied, the owner or operator of the facility or covered vessel will be given a written explanation of the Department's reasons for disapproval and a list of actions needed to gain approval. The facility or covered vessel must not commence or continue oil storage, transport, transfer, production or other operations until a plan for that facility or covered vessel has been approved.	Section 1.2
(10) If a plan holder demonstrates an inability to comply with an approved contingency plan or otherwise fails to comply with requirements of this Division, the Department may, at its discretion:	Section 1.2
(a) Place conditions on approval pursuant to section (8) of this rule; or	Section 1.2
(b) Revoke its approval.	Section 1.2
(11) Approval of a plan by the Department does not constitute an express assurance regarding the adequacy of the plan or constitute a defense to liability imposed under state law.	Section 1.2
(12) A plan holder may request a hearing on the Department's decision under OAR chapter 340, division 11.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0200)	LOCATION
Drills, Exercises, and Inspections	
(1) The Department may require plan holders of approved plans to participate in one announced drill or one unannounced limited drill annually.	Section 1.2
(2) As a condition of plan approval, the Department may require that the plan holder successfully conduct drills of the elements of a plan submitted for approval.	Section 1.2
(3) Requirements under sections (1) and (2) of this rule may be met:	Section 1.2
(a) By drills led by other state, local or federal authorities, if the Department finds that the criteria for drill execution and review equal or exceed those of the Department;	Section 1.2
(b) By drills initiated by the plan holder, if the Department participates, reviews and evaluates the drill, and if the Department finds that the drill adequately tests the plan; or	Section 1.2
(c) By responses to actual spill events, if the Department participates, reviews and evaluates the spill response, and if the Department finds that the spill event adequately tests the plan.	Section 1.2
(4) The Department may excuse a primary response contractor from full deployment participation in more than one drill if, in the past 12 months, the primary response contractor has performed to the Department's satisfaction in a full deployment drill in an exercise listed in section (3) of this rule or has satisfactorily responded to a significant spill event in Oregon.	Section 1.2
(5) The Department may require the facility or covered vessel owner or operator to participate in additional drills beyond those required in section (1) of this rule if the Department is not satisfied with the adequacy of the plan or plan implementation during exercises or spill response events.	Section 1.2
(6) The Department will review the degree to which the specifications of the plan are implemented during the drill. The Department will endeavor to notify the facility or covered vessel owner or operator of the review results within 30 calendar days following the drill. If the Department finds deficiencies in the plan, the Department will report those deficiencies to the plan holder and require the plan holder to make specific amendments to the plan pursuant to requirements of OAR 340-141-0220.	Section 1.2
(7) The Department may publish an annual report on plan drills, including a summary of response times, actual equipment and personnel use, recommendations for plan requirement changes and industry response to those recommendations.	Section 1.2
(8) The Department may require the plan holder to publish an annual report on plan drills including a summary of response times, active equipment and personnel use and recommendations for improvement.	Section 1.2
(9) The Department may verify compliance with this Division by unannounced inspections in accordance with ORS 468B.370.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0210)	LOCATION
Plan Maintenance and Use	
(1) At least one copy of the plan must be kept in a central location accessible at any time by the incident commander or spill response manager named in accordance with OAR 340-141-0140(7). Each facility covered by the plan must possess a copy of the plan and keep it in a conspicuous and accessible location.	Figure 1-1
(2) A field document prepared under OAR 340-141-0130(5) must be available to all appropriate personnel. Each covered vessel covered by the plan must possess a copy of the field document and keep it in a conspicuous and accessible location.	Section 1.2
(3) A facility or covered vessel owner or operator or their designee must implement the plan in the event of a spill. The owner or operator of the facility or covered vessel must receive approval from the Department before it conducts any major aspect of the spill response contrary to the plan unless:	Section 1.2
(a) Such actions are necessary to protect human health and safety;	Section 1.2
(b) Such actions must be performed immediately in response to unforeseen conditions to avoid additional environmental damage; or	Section 1.2
(c) The plan holder has been directed to perform such actions by the Department or the United States Coast Guard.	Section 1.2
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0220)	**LOCATION**
Plan Update Timeline	
(1) The Department must be notified in writing as soon as possible and within 24 hours of any significant change that could affect implementation of the plan, including a significant decrease in available spill response equipment or personnel. Decreases are significant if they prevent the owner or operator from carrying out the requirements of the plan in the time specified in the Oil Spill Contingency Response Planning Standards for the Zones or sub-Zones of operation. The plan holder must also provide a schedule for the prompt return of the plan to full operational status. A receipt confirmed e-mail or facsimile will be considered written notice for purposes of this section. Changes that are not considered significant include minor variations in equipment or personnel characteristics, call out lists or operating procedures. Failure to notify the Department of significant changes constitutes noncompliance with this rule as well as an inability to comply with an approved plan under OAR 340-141-0210(3).	Section 1.2
(2) If the Department finds that, as a result of a change, the plan no longer meets approval criteria pursuant to OAR 340-141-0190, the Department may, in its discretion, place conditions on approval, require additional drills or inspections or revoke approval in accordance with OAR 340-141-0190(8). Plan holders are encouraged to maintain backup response resources in order to ensure that their plans can always be fully implemented.	Figure 3.1-4
(3) Within 30 calendar days of an approved change in the plan, the owner or operator of the facility or covered vessel must distribute the amended pages of the plan to the Department and other plan holders.	Section 1.2

FIGURE D-5 - OR DEQ CROSS-REFERENCE, CONTINUED

OREGON DEQ CROSS-REFERENCE INDEX (340-141-0220)	LOCATION
(4) Plans must be reviewed by the Department every five years pursuant to ORS 468B.345(3). Plans must be submitted for reapproval unless the plan holder submits a letter requesting that the Department review the plan already in the Department's possession. The plan holder must submit the plan or such a letter at least 90 calendar days before expiration of the plan.	Section 1.2
(5) The Department may review a plan following any spill for which the plan holder is responsible.	Section 1.2
(6) The Department may require plan holders of approved plans to renew the signed letter of intent required by OAR 340-141-0100 annually to confirm that there has been no change to the plan or the plan holder's commitment to its use.	Section 1.2
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0230)	**LOCATION**
Noncompliance with Plan Requirements	
(1) No person may cause or permit the operation of an onshore or offshore facility in the state, or a covered vessel within the navigable waters of the state without a properly implemented oil spill prevention and emergency response plan approved by the Department.	Section 1.2
(2) No person may cause or permit the operation of a facility or covered vessel without proof of financial responsibility in compliance with ORS 468B.390, which requires the equivalent of the federal requirement.	Section 1.2
(3) Any violation of this division will be subject to the enforcement and penalty provisions of ORS 468.140, and OAR 340 division 012.	Section 1.2
OREGON DEQ CROSS-REFERENCE INDEX (340-141-0240)	**LOCATION**
Equipment Mutual Aid	
(1) The Department may preapprove the transfer of equipment, materials or personnel by a plan holder to another plan holder, or person, when necessary to assist in response to an oil discharge.	Section 1.2
(2) The Department's preapproval may include:	Section 1.2
(a) Waiver of response times specified in a plan; or	Section 1.2
(b) Conditions specified by the Department regarding, but not limited to, notification to the Department, return or replacement of equipment, materials or personnel and measures necessary to prevent or reduce the potential for discharges during the period of reduced response capability.	Section 1.2
(3) Preapproval under this rule does not require plan modification or update.	Section 1.2

APPENDIX E
ACRONYMS AND DEFINITIONS

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E.1 Acronyms

E.2 Definitions

E.1 ACRONYMS

ACP	Area Contingency Plan
ADIS	Alcohol and Drug Information School
AFFF	Aqueous Film Forming Foam
ASTM	American Society of Testing Materials
AMPD	Average Most Probable Discharge
API	American Petroleum Institute
ART	American Petroleum Institute
BBL	Barrel(s)
BLM	Bureau of Land Management (USDOI)
BOB	Barrel - o - Boom
BPD	Barrels Per Day
BPH	Barrels Per Hour
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
COTP	Captain of the Port (USCG)
CRC	Columbia River Cooperative
CRZ	Contamination Reduction Zone
CWA	Clean Water Act of 1977 (Federal)
DER	Designated Employee Representative
DHHS	U.S. Department of Health and Human Services
DOI	Declaration of Inspection
DOT	U.S. Department of Transportation
EAP	Emergency Action Plan
EH&S	Environmental, Health and Safety
EMD	Emergency Management Division
EMS	Emergency Medical Services
EMT	Emergency Management Team
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERAP	Emergency Response Action Plan
ERP	Emergency Response Plan
ERT	Emergency Response Team
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency

E.1 ACRONYMS, CONTINUED

FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
FRT	Facility Response Team
FWPCA	Federal Water Pollution Control Act of 1972
GIS	Geographic Information System
GPM	Gallons Per Minute
GRP	Geographic Response Plan(s)
HASP	Health and Safety Plan
HAZMAT	Hazardous Materials
HMIS	Hazardous Material Information System
HP	Horsepower
IAP	Incident Action Plan
IC	Incident Commander
ICP	Integrated Contingency Plan
ICS	Incident Command System
ICT	Incident Command Team
IMT	Incident Management Team
IOSA	Island Oil Spill Association
IRTM	Incident Response Team Manager
JIC	Joint Information Center
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LNG	Liquid Natural Gas
LO	Overall Length
LOSC	Local On-Scene Coordinator
Lp	Release Length
LPG	Liquefied Petroleum Gas
Lt	Test Length
MAWP	Maximum Allowable Working Pressure
MFSA	Marine Fire and Safety Association
MMD	Merchant Mariners Document
MMPD	Maximum Most Probable Discharge
MPS	Maximum Probable Spill

E.1 ACRONYMS, CONTINUED

MRO	Medical Review Officer
MSDS	Material Safety Data Sheets
MSO	Marine Safety Office (USCG)
MTCA	Model Toxics Control Act (Washington)
MTR	Marine Transportation Related
N/A	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIIMS	National Interagency Incident Management System
NM	Nautical Miles
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center
NRDA	National Resource Damage Assessment
NRT	National Response Team
OB	Outboard
OBA	Oxygen Breathing Apparatus
OPA 90	Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDL)
OSLTF	Oil Spill Liability Trust Fund
OSRO	Oil Spill Removal Organization
PCP	Phencyclidine
PFD	Personal Floatation Device
PIC	Person-in-Charge
PPE	Personal Protective Equipment
PREP	(National) Preparedness for Response Exercise Program
PSI	Pounds/Square Inch
PVC	Polyvinyl Chloride
QI	Qualified Individual
RAR	Resources at Risk
RCRA	Resource Conservation and Recovery Act of 1976
RCW	Revised Code of Washington
RESTAT	Resources Unit Leader
RRT	Regional Response Team (Federal)
RQ	Reportable Quantity
RSPA	Research and Special Programs Administration (DOT)

E.1 ACRONYMS, CONTINUED

SAP	Substance Abuse Professional
SAR	Search and Rescue
SARA	Superfund Amendments and Reauthorization Act
SCADA	Supervisory Control and Data Acquisition (System)
SCBA	Self Contained Breathing Apparatus
SDWA	Safe Drinking Water Act of 1986
SERC	State Emergency Response Commission
SETS	Safety Environment and Training Services
SI	Surface Impoundment
SIC	Standard Industrial Classification (Code)
SMT	Spill Management Team
SOSC	State On-Scene Coordinator
SPCC	Spill Prevention, Control, and Countermeasures (Plan)
SSC	Scientific Support Coordinator (NOAA)
TBL	Tidewater Barge Lines, Inc.
TIC	Tidewater Industrial Center
UCS	Unified Command System
UEL	Upper Explosive Limit
UHF	Ultrahigh Frequency
USA	Unusually Sensitive Areas
USACOE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOD	U.S. Department of Defense
USDL	U.S. Department of Labor
USDOE	U.S. Department of Energy
USDOI	U.S. Department of the Interior
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service (USDOI)
USGS	U.S. Geological Survey (USDOI)
VHF	Very High Frequency
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Environment
WSSAC	Washington State Substance Abuse Coalition

E.2 DEFINITIONS

Adverse Weather
The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather-related visibility, and currents with the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Aqueous Film Forming Foam
A fluoro-carbon surfactant that acts as an effective vapor securing agent due to its effect on the surface tension of the water. Its physical properties enable it to float and spread across surfaces of a hydrocarbon fuel with more density than protein foam.

Average Most Probable Discharge (USCG)
A discharge of the lesser of 50 barrels (2100 gallons) or one percent of the volume of the worst case discharge.

Barrel
Measure of space occupied by 42 U. S. gallons at 60 degrees Fahrenheit.

Bleve
A boiling liquid-expanding vapor explosion; failure of a liquefied flammable gas container caused by fire exposure. Pronounced "blevey."

Boilover
Occurs when the heat from a fire in a tank travels down to the bottom of the tank causing water that is already there to boil and push part of the tank's contents over the side.

Captain of the Port Zone (COTP)
A port-specific zone specified in 33 CFR Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).

Carbon Dioxide
A heavy, colorless, odorless, asphyxiating gas, that does not normally support combustion. It is one and one-half times heavier than air and when directed at the base of a fire its action is to dilute the fuel vapors to a lean mixture to extinguish the fire.

Class A Fire
A fire involving common combustible materials which can be extinguished by the use of water or water solutions. Materials in this category include wood and wood-based materials, cloth, paper, rubber and certain plastics.

Class B Fire
A fire involving flammable or combustible liquids, flammable gases, greases and similar products. Extinguishment is accomplished by cutting off the supply of oxygen to the fire or by preventing flammable vapors from being given off.

Class C Fire
A fire involving energized electrical equipment, conductors or appliances. Nonconducting extinguishing agents must be used for the protection of firefighters.

Class D Fire
A fire involving combustible metals, for example, sodium, potassium, magnesium, titanium and aluminum. Extinguishment is accomplished through the use of heat-absorbing extinguishing agents such as certain dry powders that do not react with the burning metals.

E.2 DEFINITIONS, CONTINUED

Cold (Support) Zone
An area free of contaminants so that Personal Protection Equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

Command Post
A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

Communication Equipment
Equipment that will be utilized during response operations to maintain communication between employees, contractors, federal/state/local agencies.

Containment Boom
A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

Contamination Reduction Zone
Same as the warm zone, a buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

Contingency Plan
A document used by: (1) federal, state, and local agencies to guide planning and response procedures regarding spill of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

Contract or Other Approved Means
Includes:

- A written contractual agreement with a response contractor. The agreement should identify and ensure the availability of the specified personnel and equipment described under U.S.C.G. Regulations within stipulated response times in the specified geographic areas

- Certification by the facility owner or operator that the specified personnel and equipment described under USCG Regulations are owned, operated, or under the direct control of the facility owner or operator, and are available within stipulated times in the specified geographic areas
- Active membership in a local or regional oil spill removal organization that has identified specified personnel and equipment described under USCG Regulations that are available to respond to a discharge within stipulated times in the specified geographic areas
- A document which:

    - Identifies the personnel, equipment, services, capable of being provided by the response contractor within stipulated response times in specified geographic areas
    - Sets out the parties' acknowledgment that the response contractor intends to commit the resources in the event of a response
    - Permits the Coast Guard to verify the availability of the response resources identified through tests, inspections, drills
    - Is incorporated by reference in the Response Plan

E.2 DEFINITIONS, CONTINUED

- For a facility that could reasonably be expected to cause substantial harm to the environment, with the consent of the response contractor or oil spill removal organization, the identification of a response contractor or oil spill removal organization with specified equipment and personnel which are available within stipulated response times in specific geographic areas.

Demand Breathing Apparatus
A type of self-contained breathing apparatus that provides air or oxygen from a supply carried by the user.

Dispersants
Those chemical agents that emulsify, disperse, or solublize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion Boom
A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

Environmentally Sensitive Areas
Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

Exclusion Zone
Same as hot zone, the area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

Exclusive Economic Zone (EEZ)
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.

Explosive Range
Flammable range; the range of the mixture of air and flammable gas or flammable vapor of liquids that must be present in the proper proportions for the mixture to be ignited. The range has upper and lower limits; any mixture above the upper explosive limit or below the lower explosive limit will not burn.

Facility
Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter the coastal waters.

Federal Fund
The oil spill liability trust fund established under OPA.

First Responders, First Response Agency
A public health or safety agency (i.e., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

Flashover
The ignition of combustibles in an area heated by convection, radiation, or a combination of the two. The action may be a sudden ignition in a particular location followed by rapid spread or a "flash" of the entire area.

E.2 DEFINITIONS, CONTINUED

Flash Point
The temperature at which a liquid fuel gives off sufficient vapor to form an ignitable mixture near its surface.

Foam
A blanket of bubbles that extinguishes fire mainly by smothering. The blanket prevents flammable vapors from leaving the surface of the fire and prevents oxygen from reaching the fuel. The water in the foam also has a cooling effect.

Hazardous Material
Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Hazardous Substance
Any substance designed as such by the Administrator of EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act.

Hazardous Waste
Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resources Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.

Higher Volume Port Area
Ports of:

- Boston, MA
- New York, NY
- Delaware Bay and River to Philadelphia, PA
- St. Croix, VI
- Pascagoula, MS
- Mississippi River from Southwest Pass, LA to Baton Rouge, LA
- Louisiana Offshore Oil Port (LOOP), LA
- Lake Charles, LA
- Sabine-Nachez River, TX
- Galveston Bay and Houston Ship Channel, TX
- Corpus Christi, TX
- Los Angeles/Long Beach Harbor, CA
- San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay to Antioch, CA
- Straits of Juan de Fuca and Puget Sound, WA
- Prince William Sound, AK

Hot (Exclusion) Zone
The area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

E.2 DEFINITIONS, CONTINUED

Hyperthermia
A dangerously high fever that can damage nerve centers. This condition can result from exposure to excessive heat over an extended period of time.

Ignition Temperature
The lowest temperature at which a fuel will burn without continued application of an ignition source.

Incident Commander (IC)
The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Incident Command System
A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

Inland Area
The area shoreward of the boundary lines defined in 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
- **Environmental Protection Agency (EPA):** Oil and chemically hazardous materials incidents on most inland waters and in the inland zone

Lead State Agency
The agency which coordinates state support to Federal and/or Local governments or assumes the lead in the absence of a Federal spill response.

Lower Flammable Limit
Minimum flammable concentration of a particular gas in the air.

Marine Transportation-Related Facility (MTR Facility)
An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

Maximum Extent Practicable
The planning values derived from the planning criteria used to evaluate the response resources described in the response plan to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities for a worst case discharge from a facility in adverse weather.

E.2 DEFINITIONS, CONTINUED

Maximum Most Probable Discharge (USCG)
A discharge of the lesser of 2,500 barrels or ten percent of the volume of a worst case discharge.

Medium Discharge (EPA)
Same as maximum most probable discharge.

National Contingency Plan
The plan prepared under the Federal Water Pollution Control Act (33 United States Code '1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code '9601 et seq), as revised from time to time.

Nearshore Area
The area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation (COLREG) lines) defined in '80.740 - 80.850 of Title 33 of the CFR.

Non-Persistent or Group I Oil
A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

- At least 50% of which by volume, distill at a temperature of 340EC (645EF)
- At least 95% of which volume, distill at a temperature of 370EC (700EF)

Non-Petroleum Oil
Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Offshore Area
The area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico it is the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in '80-740 - 80.850 of Title 33 of the CFR extending seaward to 50 nautical miles.

Oil or Oils
Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by P.L. 99-499.

Oil Spill Removal Organization (OSRO)
An entity that provides oil spill response resources, and includes any for profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Operating Area
The rivers and canals, inland, nearshore, Great Lakes, or offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating Environment
Rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

E.2 DEFINITIONS, CONTINUED

Overhaul
A procedure following a fire whereby the area is examined for hidden fire and fire extension and the fire area is cleaned up.

Owner or Operator
Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil
A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

- Group II - specific gravity less than .85
- Group III - specific gravity between .85 and less than .95
- Group IV - specific gravity .95 to and including 1.0
- Group V - specific gravity greater than 1.0

Primary Response Contractor(s)
An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual(s)
An English-speaking representative(s) of the facility identified in the plan, located in the United States, available on a 24-hour basis, familiar with implementation of the facility response plan, and trained in his or her responsibilities under the plan. This person must have full written authority to implement the facility's response plan. This includes:

- Activating and engaging in contracting with identified oil spill removal organization(s)
- Acting as a liaison with the predesignated of Federal On-Scene Coordinator (FOCS)
- Obligating, either directly or through prearranged contracts, funds required to carry out all necessary or directed response activities

Regional Response Team
The Federal Response Organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Reid Vapor Pressure Method
Method used by the American Society of Testing Materials to test vapor pressure. It is a measure of the volatility, or tendency to vaporize, of a liquid.

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.

E.2 DEFINITIONS, CONTINUED

Rivers and Canals
A body of water confined within the inland area that has a projected depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

Skimmers
Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

Slopover
An event that occurs when water is introduced into a tank of very hot liquid, causing the liquid to froth and spatter.

Small Discharge (EPA)
Same as average most probable discharge.

Sorbents
Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

Spill Management Team
The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Spontaneous Ignition
A fire that occurs without a flame, spark, hot surface, or other outside source of ignition.

Staging Areas
Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission (SERC)
A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Static Electricity
Charges of electricity accumulated on opposing and usually moving surfaces having negative and positive charges, respectively. A hazard exists where the static potential is sufficient to discharge a spark in the presence of flammable vapors or combustible dusts.

Support Zone
Same as cold zone, an area free of contaminants so that personal protection equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

Tornado Warning
A tornado has been sighted.

Tornado Watch
Conditions are favorable for tornados to form.

E.2 DEFINITIONS, CONTINUED

Unified Command
The method by which local, state, and federal agencies will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident
- Determine their overall objectives for management of an incident
- Select a strategy to achieve agreed upon objectives
- Deploy resources to achieve agreed-upon objectives

Warm (Contamination Reduction) Zone
A buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

Waste
Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Wildlife Rescue
Efforts made in conjunction with federal and state agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

APPENDIX F

Last Revised: 09/01/2008

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

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F.1 Oil Terminal Procedures - Tank/Pipeline Details

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS	
WAC 173-180-630 Compliance	
Regulation	**Description**
WAC 173-180-630(11), (11)(a) – Each plan must describe the facility's existing maintenance and inspection program. The description must summarize:	
WAC 173-180-630(11)(a)(i) – Frequency and type of all regularly scheduled inspection and preventive maintenance procedures for tanks; pipelines; other key storage, transfer or production equipment, including associated pumps, valves, and flanges; and overpressure safety devices and other spill prevention equipment	Tidewater employs a detailed, scheduled inspection and maintenance program for all tanks, pipelines, key storage, transfer and production equipment including associated pumps, valves, and flanges, and overpressure safety devices and other spill prevention equipment. For a list of inspection and preventive maintenance activities refer to Table 1.
WAC 173-180-630(11)(a)(ii) – Integrity testing of storage tanks and pipelines, including but not limited to frequency; pressures used (including ratio of test pressure to maximum operating pressure, and duration of pressurization); means of identifying that a leak has occurred; and measures to reduce spill risk if test material is product;	Tidewater inspects tests, maintains, and repairs storage tanks in accordance with the requirements laid out in API Standards 650 and 653. Results of testing are recorded in an inspection report and maintained in the facility files. Transfer pipelines are inspected and maintained in accordance with API Standard 570. Annual hydrotesting is performed on the transfer pipe system. Each transfer pipe system, including each metallic hose is tested under static pressure at least 150% of the maximum allowable working pressure. The result of the hydrotest is recorded on the Tidewater Terminal Pipeline Test Report and is maintained in the terminal files.
WAC 173-180-630(11)(a)(iii) – External and internal corrosion detection and repair;	Facility operators perform visual inspections of the tank farm on a daily basis as they perform day-to-day operations. The entire Terminal, including tanks, containment systems, pipelines and product transfer systems are inspected and documented weekly in association with Weekly Terminal Inspections. Any condition needing maintenance is reported to the facility Maintenance Supervisor. Depending on the severity of the condition, maintenance activities are prioritized and scheduled. Records of inspection and repair are maintained at the Terminal. With the exception of sections that run beneath a ramped access road to the Lower Tank Farm and the railroad tracks, the Dock Lines are primarily aboveground. Sections under the road and railroad are installed inside protective steel casings. The Dock Lines are visually inspected and ultrasonic testing inspections are conducted in accordance with API Standard 570 and hysdrostatically tested to 150% the maximum allowable operating pressure on an annual basis. An annual aboveground pipeline coating inspection is performed for aboveground piping in the facility and recorded on the Atmospheric Corrosion Inspection form. Storage tanks are inspected in accordance with API Standards 650 and 653 with both In Service and Out of Service Inspections occurring at defined intervals.

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED	
WAC 173-180-630 Compliance, Continued	
Regulation	**Description**
WAC 173-180-630(11)(a)(iv) – Damage criteria for equipment repair or replacement; and	Tidewater currently uses the following to determine damage criteria for equipment repair or replacement • API Standard 1104 – Standard for Welding Pipelines and Related Facilities • ASME B31.4 – Pipeline Transportation System for Liquid Hydrocarbons and Other Liquids • ASME B31G – Manual for Determining the Remaining Strength of Corroded Pipelines for the maintenance and replacement criteria for transfer pipelines. • API Specification 6D – Specification for Pipeline Valves • API Standard 570 – Piping Inspection Code • API Standard 650 – Welded Steel Tanks for Oil Storage • API Standard 653 – Tank Inspection, Repair, Alteration, and Reconstruction
WAC 173-180-630(11)(a)(v) – Any other aspect of the maintenance and inspection program.	Tidewater uses Datastream®, as a preventive maintenance database. It is used for tracking, scheduling inspections and for scheduling of maintenance activities on pumps, piping systems, valves and tanks. In addition, Tidewater uses the ESS Tasking module to ensure compliance with all regulatory required inspections.
WAC 173-180-630(11)(b) – The plan must include a current index of maintenance and inspection records of the storage and transfer facilities and related equipment	Tidewater maintains records of all testing and maintenance. For a detailed list of records maintained, refer to Table 1.
WAC 173-180-630(11)(d) – Existing copies of the facility's maintenance and inspection records for the five-year period prior to plan submittal must be maintained and must be available for inspection if requested by Ecology. The plan must document the use of a system to maintain such records over a five-year period for subsequent activity.	All inspection and maintenance activities are recorded on the applicable forms and logs (Table 1) and maintained in the terminal files for, at a minimum, five years. Records may be maintained for a longer duration if required by other regulations (e.g. certain records are required to be maintained for the life of the tank/pipeline/component).

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED

WAC 173-180-630 Compliance, Continued

Table 1 – Inspection and Preventive Maintenance Frequencies

Inspection	Frequency
Terminal Inspection – Visual Inspection of facility, safety equipment, leak checks, environmental protection items (e.g., secondary containment, pumps, valves, etc.), waste storage areas. Visual inspections of piping and tanks. Recorded on the "Weekly Terminal Inspection Form"	Weekly
Inspections of the tank farms and other operations areas in conjunction with normal business activities	Daily
Formal exterior in-service petroleum breakout tank inspection with results recorded on the "Storage Tank Routine In-Service Inspection Form" (i.e. third-party certified API 653 inspector).	Every 5 Years
Interior Out-of-Service breakout tank inspection with results recorded in an inspection report (i.e. third-party certified API 653 inspector).	Every 20 Years
Pipeline rectifier inspection with results recorded on the "Monthly Rectifier Inspection Form".	Monthly
Cathodic protection survey with results recorded in an inspection report (i.e. third-party certified NACE inspector).	Annually
Pipeline hydrostatic pressure test with results recorded on the "Tidewater Terminal Pipeline Test Report"	Annually
Right-of-way and exposed marker inspections of pipelines with results recorded on the "Pipeline Right-of-Way & Marker Inspection Form".	Weekly
Tank overfill protection systems inspection and high-level alarm testing with results recorded on the "Monthly High-Level Inspection Report Form". Additionally, high-level alarms are tested prior to each petroleum transfer.	Monthly and prior to transfers
Inspection of over-pressure safety devices with results recorded on the "Relief Valve Inspection Report".	Biannually
Mainline valve inspection with results recorded on the "Valve Inspection Report Form".	Semiannually
Equipment leak inspections (for equipment in gasoline service) with results recorded on the "Monthly Equipment Leak Inspection Log".	Monthly
Inspection of the wharf transfer hoses and couplings recorded on the "Hose Test Report".	Quarterly
Inspection of spill response equipment with results recorded on the "Response Trailer Inspection Form"	Quarterly
Barge transfer checklist (documents tank levels during transfers) as recorded on the "Barge Transfer Checklist"	Per transfer

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED

WAC 173-180-630 Compliance, Continued

Table 1 – Inspection and Preventive Maintenance Frequencies

Inspection	Frequency
Petroleum loading rack meter proving as recorded on the "Meter Proving Report".	Annually
Shore tank strapping worksheet (confirms available space prior to transfer into a tank) as recorded on the "Shore Tank Strapping Worksheet".	Per transfer
Inspections of the Hazardous Materials/Waste Storage areas as recorded on the "Weekly Terminal Inspection" Form.	Weekly
Testing of the emergency diesel-driven well pump (fire protection) as recorded on the "Weekly Terminal Inspection" Form	Monthly
Inspection of the fire suppression system by an outside contractor.	Semiannually
Stormwater permit inspection as recorded on the "Snake River Terminal Industrial Stormwater Monthly Inspection Report"	Monthly
Routine in-service break-out and containment system inspections are recorded on the "Weekly Terminal Inspection" Form	Monthly
Spill response vessels and vessel trailers undergo inspection and preventive maintenance which is recorded on the "Spill Response Vessels and Vessel Trailers Bi-Annual Maintenance/Inspection Report"	Biannually
Pressure gauge and pressure relief valve testing, calibration and maintenance are recorded and maintained in the facility files	Annually

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED	
WAC 173-180-630 Compliance, Continued	
Regulation	**Description**
WAC 173-180-630(12) – Each plan must describe spill prevention technology currently installed and in use, including:	
WAC 173-180-630(12)(a) – Tank and pipeline material and design;	The Terminal has aboveground and underground piping. Cathodic protection was installed and is maintained in accordance with the practices and standards of the NACE and ASME Code B31.4. The cathodic protection system is monitored on a regular basis as part of the monthly pipeline rectifier inspections and an annual cathodic protection survey conducted by a 3rd party NACE inspector. The pipelines are constructed of carbon steel. The storage tanks are designed to API standard 650 or its predecessor 12C standards and are cone tank roof designed. Several of the tanks have internal floating roofs and several have double bottoms. All tanks undergo periodic In-Service and Out-of-Service Inspections in accordance with API 653. All tanks are constructed of carbon steel
WAC 173-180-630(12)(b) – Storage tank overflow alarms, low level alarms; tank overflow cut-off switches; automatic transfer shutdown systems; methods to alert operators; system accuracy; and tank fill margin remaining at time of alarm activation in terms of vertical distance, quantity of liquid and time before overflow would occur at maximum pumping rate; documentation required under 40 CFR 112.7€(2)(viii) or 33 CFR 154.310(a)(12-13) may be used to address some or all of these elements.	Tidewater has automated and redundant high level (96% of shell capacity) and high-high level (97% of shell capacity) alarms on each petroleum storage tank at the Snake River Terminal. Each tank alarm is manually tested prior to any transfer operation to verify proper operation. Alarms are indicated by an amber light for high level and a clear light for high-high level, as well as by an audible alarm. Computer systems that monitor levels and leak detection alarms are present in the Dock Shack. This information can also be monitored using a panel view located in the Petroleum Tank Farm. Should the level of product reach the preset high-high level, a warning alarm would be activated in order that the facility operator immediately stops the flow of product into the tank. The high-high level system also alarms the Dock Shack and the panel view, which prompts the operator to shut down during barge transfers. In addition to testing prior to transfer, overfill protection systems are inspected monthly in conjunction with the monthly overfill protection system and inspection tests and recorded on the "Monthly High-Level Inspection Report Form".
WAC 173-180-630(12)(c) – Leak detection systems for both active and nonactive pipeline conditions, including thresholds in terms of duration and percentage of pipeline flow; limitations on system performance due to normal pipeline events; and procedures for operator response to leak alarms; Documentation required under 40 CFR 112.7(e)(3) may be used to address some or all of these elements;	Tidewater's three barge lines are monitored by a meter-to-meter leak detection system that compares gross volumes between the dock meter and tank farm meter inside the petroleum containment area to within 7.5% real time. Any variance outside of 7.5% sounds an audible alarm as well as a red light which is visible throughout the operating area. These alarms will trigger employees to immediately shut down operations to investigate. Additionally, the dock pipelines are encased in metal culvert pipes that slope to low point sumps that are equipped with float switches. Any liquid that accumulates in these low point sumps will trip the float switch and activate an alarm for terminal personnel to investigate.

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED	
WAC 173-180-630 Compliance, Continued	
Regulation	**Description**
WAC 173-180-630(12)(e) – Rapid pump and valve shutdown procedures, including means of ensuring that surge and over-pressure conditions do not occur; rates of valve closure; sequence and time duration (average and maximum) for entire procedure; automatic and remote control capabilities; and displays of system status for operator use.	At the petroleum berth there are a total of three 10 inch pipelines. (b) (3), (b) (7)(F) [redacted]
WAC 173-180-630(12)(g) – Methods to minimize post-shutdown residual drain-out from pipes, including criteria for locating valves; identification of all valves (including types and means of operation) that may be open during a transfer process; and any other techniques for reducing drain-out;	Motor operated valves (MOVs) installed on the dock will immediately shut down upon alarm. Dockmen will close the manual valves on at the tank. If possible, banding material or wedges will be used to minimize the residual release from occurring upon valve closure. In the tank farm itself, there are multiple block and check valves to isolate leaks and reduce residual leakage. Maps/diagrams of the tank farm showing block, check, and relief valves are contained in the Tidewater Terminal Company Operations and Maintenance Manual.
WAC 173-180-630(12)(h) – Means of relieving pressure due to thermal expansion of liquid in pipes during quiescent periods;	All pipes, critical block valves, and other valves have pressure reliefs installed specifically designed to release thermal pressure. Thermal pressure reliefs are vented to compatible tanks to prevent a release of hydrocarbons to the environment. These pressure reliefs are tested on an annual basis.
WAC 173-180-630(12)(i) – Secondary containment, including capacity, permeability and material design; Documentation required under 40 CFR 112.7(e)(1) and (2)(iii-iv) may be used to address some or all of these elements;	The Tidewater Terminal Company Snake River Terminal Spill Prevention, Control & Countermeasure (SPCC) Plan contains all secondary containment information including capacity, permeability and design.

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED	
WAC 173-180-630 Compliance, Continued	
Regulation	**Description**
WAC 173-180-630(12)(k) – Internal and external corrosion control coatings and monitoring;	The Terminal has aboveground and underground piping. Cathodic protection was installed and maintained in accordance with the practices and standards of the National Association of Corrosion Engineers (NACE) and the American Society of Mechanical Engineers (ASME) Code B31.4. The cathodic protection system is monitored on a regular basis as part of monthly pipeline rectifier inspections and an annual cathodic protection survey conducted by a 3rd party NACE inspector. If a section of the underground piping is unearthed, Tidewater staff will take the opportunity to carefully examine signs of deterioration. If corrosion damage is found, Tidewater investigates the problem, initiates repairs, and performs any additional inspections deemed appropriate. For aboveground breakout tanks where the corrosion of the bottom is controlled by cathodic protection, the cathodic protection system is inspected in accordance with NACE RP0193 (latest version). An annual cathodic protection survey is performed by a qualified NACE engineer to determine the effectiveness of the cathodic protection system. Cathodic protection is provided by an impressed current system. The current source is inspected at intervals not exceeding two months. The protective facilities for impressed current sources are inspected annually as part of preventive maintenance program to minimize in-service failures. Isolating devices, bonds, and insulators are evaluated during the periodic survey. When access to the tank bottom is possible, the bottom is examined for evidence of corrosion. Any bond whose failure would jeopardize structure protection is tested six times each calendar year. Non-critical bonds are inspected annually. A record of each bond inspection is made and forwarded to the Terminal Maintenance Supervisor on the "Tank Farm Rectifier Inspection" form.
WAC 173-180-630(12)(l) – Stormwater and other drainage retention, treatment, and discharge systems, including maximum storage capacities and identification of any applicable discharge permits;	No stormwater conveyance system is present at the Terminal for collecting and diverting stormwater to the Snake River. There are no catch basins, nor are there any discrete outfalls that drain surface water to the Snake River. Stormwater is contained inside shallow berms constructed along the shoreline to promote ponding in low points and to allow stormwater to infiltrate and/or evaporate following inspection. The Terminal has a Stormwater Pollution Prevention Plan (SWPPP) and pollution prevention team with specific duties for implementing the following: • Remove any stormwater from secondary containment areas prior to product transfers. Any standing water inside secondary containment is visually inspected for the presence of product. If product is detected, the water is removed by portable pumps and stored in a slop tank or 55-gallon drums pending off-site disposal or recycling. • Locate spill kits within 25 feet of stationary fueling stations, fuel transfer stations, and mobile fueling units (i.e., Petroleum Loading Rack, Barge Header Rack, BN RML Railcar Rack, and Yard Truck Fueling Station).

F.1 OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS

OIL TERMINAL PROCEDURES - TANK/PIPELINE DETAILS, CONTINUED	
WAC 173-180-630 Compliance, Continued	
Regulation	**Description**
WAC 173-180-630(12)(n) – Criteria for suspension of operations while leak detection or other spill control systems are inoperative.	Should the leak detection system become inoperative, the transfer system will be immediately suspended. The operator will contact the on-call manager/supervisor. After discussions of the risks, severity of the discrepancy (e.g. power outage vs. a meter failure), and all other applicable conditions, the operators will be notified on whether to proceed. If it has been determined that a low risk exists and operations are to resume, the operators will be instructed to walk the entire pipeline system to verify the integrity. If determined to be safe, the Barge Transfer Checklist will be used to record 15 minute system checks in accordance with WAC 173-180-340. If necessary, extra personnel will be detailed to the operation to ensure the safety of the transfer. In the event of an inoperative spill control system, the operators will immediately cease transfer operations and contact the on-call manager/supervisor. Operations will remain suspended until the operation has been thoroughly investigated and the issue corrected.

Regulation	**Description**
WAC 173-180-630(15), (15)(a) – Each plan must include a detailed and comprehensive analysis of facility spill risks based on the information required in subsections (11) through (14) of this section, and other relevant information. The risk analysis must:	
WAC 173-180-630(15)(a)(i) – Evaluate the construction, age, corrosion, inspection and maintenance, operation, and oil spill risk of the transfer, production, and storage systems in the facility, including piping, tanks, pumps, valves, and associated equipment;	Evaluations of construction, age, corrosion, inspection and maintenance, operation, and oil spill risk of the transfer, production, and storage systems in the facility, including piping, tanks, pumps, valves, and associated equipment, and evaluation of the spill minimization and containment systems within the facility has been prepared under the supervision of a licensed professional engineer is located in the Tidewater Terminal Company Snake River Terminal Spill Prevention, Control & Countermeasure (SPCC) Plan
WAC 173-180-630(15)(a)(ii) – Evaluate spill minimization and containment systems within the facility;	
WAC 173-180-630(15)(a)(iii) – Be prepared under the supervision of (and bear the seal of) a licensed professional engineer or another individual which Ecology has deemed to have an acceptable level of expertise;	

APPENDIX G
ADDITIONAL INFORMATION

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