



**Oil Discharge Prevention & Contingency Plan
and Facility Response Plan**
Juneau and Douglas Island Terminals

ADEC Plan 25-CP-1006

March 2025

Prepared for:

Petro 49, Inc.
2101 E. 63rd Ave.
Anchorage, AK 99507

Facility Address:

Juneau Terminal	Douglas Island Terminal
1076 Jacobsen Drive	3560 North Douglas Hwy
Juneau, AK 99801	Juneau, AK 99801

Prepared by:

Integrity Environmental LLC

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FACILITY INFORMATION

Facility Name:	Juneau and Douglas Island Terminals	
Physical Address:	Juneau Terminal 1076 Jacobsen Drive Juneau, AK 99801	Douglas Island Terminal 3560 North Douglas Hwy Juneau, AK 99801
Type:	Onshore Bulk Fuel Storage, Temporary Storage & Distribution	
Mailing Address:	Petro 49, Inc. P.O. Box 21388 Juneau, AK 99802	
Phone Number:	Juneau Terminal 907-586-1276 (Office) 907-586-3431 (Fax)	Douglas Island Terminal 907-586-4400 (Office) 907-586-4402 (Fax)
Latitude/Longitude: <i>Datum: WGS 84</i>	Juneau Terminal 58° 17.416' N 134° 23.166' W	Douglas Island Terminal 58° 17.930' N 134° 26.189' W
Owner/Operator:	Petro 49, Inc. 2101 E. 63rd Ave. Anchorage, AK 99507	
NAICS Code:	454311	
Qualified Individuals:	Mathew Lindsey David Simmerman	907-865-2302 (office) 907-250-5935 (cell) 907-865-2325 (office) 907-315-6276 (cell)
	Juneau Terminal	Douglas Island Terminal
Date of Operation:	1953, rebuilt in 1971	1993
Date of Ownership:	2021	1993
Wellhead Protection Areas:	N/A	
Distance to Navigable Water:	Less than ¼ mile	
SIC Code:	5171	
Maximum Oil Storage:	4,490,456 gallons / 106,916 bbls	
Number of Tanks:	15	
Primary Products Handled:	ULSD, Gasoline, Jet A, AvGas	
Worst Case Discharge:	EPA: 1,012,961 gallons ADEC: 288,694 gallons USCG: 17,934 gallons	
Primary Contact:	Kieran Smith, Terminal Manager 907-586-4400 (office) 907-723-9923 (cell)	

Applicability of Substantial Harm Criteria

Facility Name: Juneau and Douglas Island Terminals
Facility Address: 1076 Jacobsen Drive and 3560 North Douglas Hwy, Juneau, AK 99801

Does the facility transfer oil over-water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes X No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes No X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes X No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes No X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No X

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Signature: 

Name: David Simmerman
Title: Environmental Compliance Manager, Petro 49, Inc.
Date: 4-13-2025

DISTRIBUTION LIST

Company Name

Juneau Terminal
(original copy)
Petro 49, Inc.
1076 Jacobsen Dr.
Juneau, AK 99801

Douglas Island Terminal
(original copy)
Petro 49, Inc.
3560 N. Douglas Hwy.
Juneau, AK 99801

Corporate Office
Petro 49, Inc.
2101 E. 63rd Ave.
Anchorage, Alaska 99507

State of Alaska

Alaska Department of Environmental Conservation
Spill Prevention, Preparedness & Response Division
Southeast Alaska Unit
P.O. Box 111800
Juneau, AK 99811-1800

Alaska Department of Natural
Resources
550 West 7th Ave., Ste. 1360
Anchorage, AK 99501-3557

Alaska Department of Fish and Game
Habitat Division
P.O. Box 110024
Juneau, AK 99811-0024

Local/Regional Agencies

City and Borough of Juneau
155 S Seward St.
Juneau, AK 99801

SEAPRO

Southeast Alaska Petroleum Response
Organization
(SEAPRO)
540 Water St., Ste. 201
Ketchikan, AK 99901

Federal Government Agencies

EPA Region 10
Attn: Bob Whittier
222 W 7th Ave. #19
Anchorage, AK 99513-7588

United States Coast Guard
Sector Juneau
709 E. 9th St. #223B
Juneau, AK 99802

Promulgation Letter**18 AAC 75.448(d)(3)**

This Oil Discharge Prevention and Contingency Plan (ODPCP) for the Juneau and Douglas Inland Terminals has been reviewed and approved by the management of Petro 49, Inc. The resources necessary to fully implement the plan are committed to the operation.



David Simmonman
Environmental Compliance Manager

3-14-2025

Date

Plan Review Procedures

18 AAC 75.415(a)

This Oil Discharge Prevention and Contingency Plan will be maintained and updated by Petro 49, Inc (P49). The plan will be updated as needed and submitted to the State and to the applicable resource agencies.

Updated materials will be transmitted to plan holders (see Distribution List section of this plan) by cover letter. The submission will contain a brief description of each amendment, the amended pages, and instruct the holder on making changes. Revisions will be recorded in the Record of Revisions section of this plan.

Routine Updates

18 AAC 75.415(b)

Routine plan updates include revision to the list of names, addresses, or telephone numbers of the plan holder's spill command and response personnel; and a revision to a training procedure or course work requirement that does not reduce the amount or quality of training required by this plan. Routine updates to the plan will be submitted within 10 working days after the date the proposed change occurs.

Plan Renewal Procedures

18 AAC 75.420
18 AAC 75.460(d)

Application for renewal must be submitted at least 180 days, or the number of days stated in the plan approval letter under 18 AAC 75.460(a), in advance of expiration of the plan to permit department review before the plan approval expired. Plans must be renewed every five years.

Notification of Non-readiness

18 AAC 75.475

If a significant change occurs in, or is made to, any component of this plan that would diminish response capability, P49 will notify the department in writing within 24 hours.

JUNEAU AND DOUGLAS ISLAND TERMINALS LOG OF REVISIONS

PLAN REVIEW AND UPDATE PROCEDURES

The plan will be reviewed and updated annually for routine changes such as names and phone numbers or other changes that do not increase the capacity to spill nor reduce the response capability of the plan holder. Every revision will be logged on the form below. The revision number and date will be entered in the footer of each page changed. The remarks column is for comments or information to explain the revision. Revisions will be sent to every plan holder with a cover letter listing all revisions and instructions for removing and adding pages. If no changes are required, the fact the plan was reviewed will be logged.

If changes to the facility occur that necessitate a major amendment, such as changes to the type of oil stored, the response capabilities, or any change that significantly affects the plan, the changes must be approved by the department prior to implementation.

The plan is approved by the EPA, USCG, and ADEC. Plan approval expires every five years. The plan must be submitted to each agency in sufficient time before its approval expires to allow the agency to review and re-approve the plan. Routine changes described above should be made before submitting the plan for renewal.

It is the responsibility of the plan holder to post the changes in the plan.

No.	Date	Page / Section Number(s)	Remarks
0	March 2025	All	Plan renewal. Combined Juneau Terminal and Douglas Island Terminal into one ODPCP-FRP.

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ENVIRONMENTAL PROTECTION AGENCY CROSS REFERENCE

This plan follows the contingency planning format of the Alaska Department of Environmental Conservation. As required by 40 CFR 112.20(h), the following cross-reference that identifies the location of the elements listed in Appendix F of 40 CFR 112.20 and 40 CFR 112.20.

40 CFR 112 Appendix F	40 CFR 112.20	Subject	Location In This Plan
--		General Facility Information	Introduction
--	Appen. C, Attach. C-II	Applicability of Substantial Harm Form	Introduction
1.1	(h)(1)	Emergency Response Action Plan	Section 1.0
1.1.1	(h)(1)(i)	Qualified Individual Information	Section 1.2.1
1.1.2	(h)(1)(ii)	Emergency Notification Phone List	Section 1.2, Tables 1.2-1, 1.2-2, and 1.2-1
1.1.3	(h)(1)(iii)	Spill Response Notification Form	Figure 1.2-1
1.1.4	(h)(1)(iv)	Response Equipment List and Location	Section 3.6.1, Table 3.6-1
1.1.5	(h)(3)(vi)	Response Equipment Testing and Deployment	Section 1.5, 3.6.5
1.1.6	(h)(1)(v)	Facility Response Team List	Table 1.2-3
1.1.7	(h)(1)(vi)	Facility Evacuation Plan	Section 3.1.5, Figure 1.8-9
1.1.8	(h)(1)(vii)	Immediate Actions	Sections 1.1
1.1.9	(h)(1)(viii)	Facility Diagrams	Section 1.8
1.2	(h)(2)	Facility Information	Introduction and Sections 1.8, 3.1
1.2.1	(h)(2)	Facility Name and Location	Introduction and Sections 1.8, 3.1
1.2.2	(h)(2)	Latitude and Longitude	Introduction and Section 1.8
1.2.3		Wellhead Protection Area	Sections 3.2, and 3.9.3
1.2.4	(h)(2)	Owner/Operator	Introduction
1.2.5	(h)(1)(i)	Qualified Individuals	Intro, Section 1.2.1, Table 1.2-5
1.2.6		Date of Oil Storage Startup	Introduction
1.2.7		Current Operation	Introduction and Section 1.8
1.2.8		Substantial Expansions	Section 3.1.3
1.3	(h)(3)	Emergency Response Information	Part 1
1.3.1	(h)(3)(i)	Notification	Section 1.2, Tables 1.2-1, 1.2-2, 1.2-3, & 1.2-4, Figure 1.2-1 & 1.2-2
1.3.2	(h)(3)(vi)	Facility Response Equipment List	Section 3.6.1, Table 3.6-1
1.3.3	(h)(3)(vi)	Testing/Deployment	Sections 1.5, 3.6.4 and 3.9.1
1.3.4	(h)(1)(v)	Personnel	Sections 1.2, 1.5.1, 1.5.2, and 3.7, Table 1.2-1, 1.2-2, 1.2-3 and 1.5-1
1.3.5	(h)(3)(vii)	Evacuation Plan	Section 3.1.5, Figure 1.8-8
1.3.6	(h)(3)(ix)	Qualified Individual's Duties	Sections 1.2, and 1.2.1
1.4	(h)(4)	Hazard Evaluation	Sections 1.6.5, 2.3, 2.4, 3.4 and 3.9
1.4.1	(h)(4)	Hazard Identification	Sections 1.6.5 and 3.1, Table 3.1-1

40 CFR 112 Appendix F	40 CFR 112.20	Subject	Location In This Plan
1.4.2	(h)(5)	Vulnerability Analysis	Section 3.2, Table 3.2-2
1.4.3	(h)(4)	Analysis of the Potential for a Spill	Section 2.3
1.4.4	(h)(4)	Oil Spill History	Sections 2.2, & 2.4
1.5	(h)(4)	Discharge Scenarios	Section 1.6.12
1.5.1	(h)(5)(ii)	Small and Medium Discharges	Sections 1.6.14, & 1.6.15
1.5.2	(h)(5)(i)	Worst Case Discharge	Section 1.6.12.1
1.6	(h)(6)	Discharge Detection Systems	Sections 2.5
1.6.1	(h)(6)	Discharge Detection by Personnel	Sections 2.5.1
1.6.2	(h)(6)	Automated Discharge Detection	Sections 2.5.3
1.7	(h)(7)(i)	Plan Implementation	--
1.7.1	(h)(7)(ii)	Response Resources	Sections 3.5, & 3.6
1.7.2	(h)(7)(iii)	Disposal Plan	Section 1.6.9
1.7.3	(h)(7)(iv)	Containment and Drainage Planning	Sections 1.6.1, 1.6.5, 3.2.1 & 3.6, Figure 1.8-4
1.8	(h)(8)	Inspections, Drills/Exercises, Training	Sections 2.5 and 3.8
1.8.1	(h)(8)(i)	Facility Inspections	Section 2.5.1, 3.1, Appendix A
1.8.1.1	(h)(8)(i)	Tank Inspections	Section 2.5.3, Table 2.5-1, Appendix A
1.8.1.2	(h)(8)(i)	Response Equipment Inspection	Section 3.6.4, Appendix A
1.8.1.3	(h)(8)(i)	Secondary Containment Inspection	Section 2.5.5, Appendix A
1.8.2	(h)(8)(ii)	Drills and Exercises	Section 3.8.1
1.8.2.1	(h)(8)(iv)	Qualified Individual Notification Drill Logs	Section 3.8.1
1.8.2.2	(h)(8)(iv)	Spill Management Team Tabletop Exercise Logs	Section 3.8.1
1.8.3	(h)(8)(iii)	Response Training	Section 3.8
1.8.3.1	(h)(8)(iv)	Personnel Response Training Logs	Section 3.8.1, Appendix A
1.8.3.2	(h)(8)(iv)	Discharge Prevention Meeting Logs	Section 3.8.1, Appendix A
1.9	(h)(9)	Diagrams	Section 1.6.12, 1.8.2, 3.9.3
1.10	(h)(10)	Security	Section 2.1.3
2.0	(h)(11)	Response Plan Cover Sheet	Introduction
2.1		General Information	Introduction, Sections 1.8, 3.1
2.2	Appen. C, Attach. C-II	Applicability of Substantial Harm Criteria	Introduction
2.3		Certification	Introduction
3.0		Acronyms	Section 3.10

U.S. COAST GUARD CROSS REFERENCE

The operations are regulated by the USCG regulations 33 CFR 154. The following pages provide information required for Facility Response Plans under 33 CFR 154. The overall response is in the form of a cross-reference in accordance with the guidelines as presented in 33 CFR 154.1035.

33 CFR 154	Information	Location in This Plan
1035 (a)	Introduction and Plan Contents	Table of Contents, Introduction
1035 (a)(1)	Facility Name, Address & Telephone	Introduction
1035 (a)(2)	Facility Location	Introduction, Part 1, Section 1.8.1
1035 (a)(3)	Facility Owner/Operator	Introduction, Part 1, Section 1.2
1035 (a)(4)	Table of Contents	Introduction, Table of Contents
1035 (a)(5)	Cross-reference	Introduction, This table
1035 (a)(6)	Record of Changes	Introduction
1035 (b)	Emergency Response Action Plan	Part 1
1035 (b)(1)	Notification Procedures	Section 1.2
1035 (b)(1)(i)(A)	Facility Personnel	Section 1.2.1
1035 (b)(1)(i)(B)	Agencies	Tables 1.2-1, & 1.2-4, Section 1.2
1035 (b)(1)(ii)	Notification Form	Figure 1.2-2
1035 (b)(2)	Spill Mitigation Procedures	Sections 2.3, 1.6.12
1035 (b)(2)(i)	Volumes by Oil Groups	Sections 1.6.12, 5.3
1035 (b)(2)(i)(A)	Average Most Probable Discharge	Sections 1.6.15, 5.3
1035 (b)(2)(i)(B)	Maximum Most Probable Discharge	Sections 1.6.14, 5.3
1035 (b)(2)(i)(C)	Worst Case Discharge	Sections 1.6.12.1, 5.3
1035 (b)(2)(i)(D)	Worst Case Discharge (Non- Transportation)	n/a
1035 (b)(2)(ii)	Procedures to Mitigate or Prevent Discharges	Section 2.1, 2.5, 3.8
1035 (b)(2)(ii)(A)	Failure of Manifold, etc.	Section 2.3
1035 (b)(2)(ii)(B)	Tank Overfill	Sections 1.6.1, 2.3
1035 (b)(2)(ii)(C)	Tank Failure	Sections 1.6.1, 2.3
1035 (b)(2)(ii)(D)	Piping Rupture	Sections 1.6.1, 2.3
1035 (b)(2)(ii)(E)	Piping Leak	Sections 1.6.1, 2.3
1035 (b)(2)(ii)(F)	Explosion or Fire	Section 1.6.2
1035 (b)(2)(ii)(G)	Equipment Failure	Section 1.6.1, 2.3
1035 (b)(2)(iii)	Response Personnel and Equipment	Sections 1.2.1, 1.5.1, 3.3, 3.6
1035 (b)(3)	Facility Response Activities	Table 1.2-5, Section 1.2.1, 1.6, 3.3, Figure 3.3-1
1035 (b)(3)(i)	Response Initiation	Sections 1.1, 1.2
1035 (b)(3)(ii)	Responsibilities of QI and Alternate	Table 3.6-1 Sections 1.2.1, 3.3, 3.6.1
1035 (b)(3)(iii)	Organizational Structure	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(A)	Command and Control	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(B)	Public Information	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(C)	Safety	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(D)	Agency Liaison	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(E)	Spill Operations	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(F)	Planning	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(G)	Logistics	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(H)	Finance	Section 3.3, Figure 3.3-1
1035 (b)(3)(iv)	Oil Spill Removal Organization	Section 3.7, Table 1.2-1

33 CFR 154	Information	Location in This Plan
1035 (b)(3)(iv)(A)	Equipment and Supplies	Tables 1.2-1, & 3.6-2
1035 (b)(3)(iv)(B)	Trained Personnel	Table 1.2-3, Section 1.5.2, 3.3.4
1035 (b)(3)(v)	Job Descriptions	Section 3.3
1035 (b)(3)(vi)	Dispersants	n/a
1035 (b)(3)(vii)	Aerial Facilities	Sections 1.6.3 and 3.5.3
1035 (b)(3)(viii)	Mobile Facilities	Section 1.8.2 and 3.1
1035 (b)(3)(ix)	Mobile Facilities, multiple COTP zones	n/a
1035 (b)(4)	Fish, Wildlife, and Sensitive Areas	Sections 1.6.4, 1.6.5, 3.9
1035 (b)(4)(i)	Identification of Areas for Worst Case Discharge	Introduction, Section 3.2.2, 3.9
1035 (b)(4)(ii)	Response Actions for Worst Case Discharge	Sections 1.6.5, 1.6.11, 1.6.12
1035 (b)(4)(ii)(A)	Fish, Wildlife and Sensitive Areas	Sections 1.6.4, 1.6.11, 3.9
1035 (b)(4)(ii)(B)	Response Actions to Protect Areas	Sections 1.6.4, 1.6.11, 1.6.12, 3.8
1035 (b)(4)(ii)(C)	Location of Sensitive Areas	Section 1.6.4, 3.9, Figures 1.6-4, 3.9-1, 3.9-2
1035 (b)(4)(iii)	Resources for Worst Case Discharge	Sections 1.2, 1.6.12.1, 3.6, 3.7
1035 (b)(4)(iii)(A)	Equipment and Personnel to Protect Sensitive Areas	Sections 3.6, 3.8, Tables 1.5-1, 3.6-1
1035 (b)(4)(iii)(B)	Calculation of Planning Distance	Section 3.9
1035 (b)(4)(iii)(C)	Additional Environments Protected	n/a
1035 (b)(5)	Disposal Plan	Section 1.6.9
1035 (c)	Training and Exercises	Part 2, Sections 2.1, 3.8
1035 (c)(1)	Training Procedures	Section 3.8.1
1035 (c)(2)	Exercise Procedures	Section 3.8.1
1035 (d)	Plan Review and Updates	Introduction
1035 (e)	Appendices	--
1035 (e)(1)	Facility Specific Information	Sections 1.8, 3.1
1035 (e)(1)(i)	Description of Facility	Sections 1.8 & 3.1
1035 (e)(1)(ii)	Vessel Transfers	Section 3.1.4.2, 1.8.1
1035 (e)(1)(iii)	Location of First Valve	Figure 1.8-2
1035 (e)(1)(iv)	Information on Oils at Facility	Section 3.1.2, Appendix C
1035 (e)(1)(iv)(A)	Generic or Chemical Name	Appendix C
1035 (e)(1)(iv)(B)	Appearance and Odor	Appendix C
1035 (e)(1)(iv)(C)	Physical/Chemical Characteristics	Appendix C
1035 (e)(1)(iv)(D)	Hazards in Handling	Appendix C
1035 (e)(1)(iv)(E)	Firefighting Procedures	Section 1.6.2
1035 (e)(2)	List of Contacts	Section 1.2
1035 (e)(2)(i)	QI and Alternate	Intro, Section 1.2, Table 1.2-5
1035 (e)(2)(ii)	Oil Spill Removal Contractor	Section 3.7, Table 1.2-1
1035 (e)(2)(iii)	Agency Contacts	Tables 1.2-1, 1.2-4
1035 (e)(3)	Equipment Lists and Records	Section 3.6, Table 3.6-1
1035 (e)(3)(i)	Equipment and Personnel for Average Most Probable Spill	Section 3.6
1035 (e)(3)(ii)	Major Equipment Listing	Section 3.6, Tables 3.6-1, 3.6-2
1035 (e)(3)(iii)	OSRO Equipment	Section 3.6.2, 3.7, Table 3.6-2
1035 (e)(4)	Communications Plan	Sections 1.4
1035 (e)(5)	Site-Specific Safety and Health Plan	Sections 1.3
1035 (e)(6)	Acronyms and Definitions	Section 3.10.1

Section 1.0 Response Action Plan

18 AAC 75.449(a)

This response action plan for P49's Juneau Terminal and Douglas Island Terminal (Juneau Terminals) describes how P49 plans to meet its response planning standard requirements under federal and state law. The plan addresses the requirements of the State of Alaska, the Environmental Protection Agency (EPA), and the United States Coast Guard (USCG). The planning standard for each agency is calculated in accordance with its rules and the highest volume is addressed for the worst case. The plan explains how the response equipment needed to recover the worst case discharge within the shortest time required is mobilized and deployed. See Section 5 of this plan for exact calculations and further discussion.

An integral part of this plan is the Technical Manual for Southeast Alaska prepared by SEAPRO. See Section 3.11 of this plan for a hyperlink to the SEAPRO Technical Manual. Sections 1 and 3 of the SEAPRO Technical Manual provide most of the information required for Sections 1 and 3 of the Alaska Oil Discharge Prevention and Contingency Plan (ODPCP). The SEAPRO Response Action Plan and Supplemental Information is adopted as part of this plan. Additional information specific to P49's operation is provided in this plan; however, the two plans must be considered together.

The Juneau Terminal is located at 58° 17.416' N; 134° 23.166' W.

Facility Information

Company Name: Petro 49, Inc.
Address: 1076 Jacobsen Dr.
 Juneau, AK 99801
Phone: 907-586-1276 (Office)
Fax: 907-586-3431

The Douglas Island Terminal is located at 58°18.0' N; 134° 26.2' W.

Facility Information

Company Name: Petro 49, Inc.
Address: 3560 North Douglas Hwy.
 Juneau, AK 99801
Phone: 907-586-4400 (Office)
Fax: 907-586-4402

Both the Juneau and Douglas Island Terminals each contain a tank farm, TTLR, warehouse building with offices, and fuel docks. In addition, the Douglas Island Terminal has a vapor recovery unit.

The largest tank is 1,012,961 gallons / 24,118 barrels, and it is located at the Juneau Terminal. The planning standard volumes are calculated in Section 5 of this plan for each regulatory agency with jurisdiction.

Section 1.1 Emergency Action Checklist

18 AAC 75.449(a)(1) and (a)(2)

ASSESS SAFETY

- Check for fire hazards. (see Section 1.6.2)
- Shut off ignition sources.
- Implement and enforce safety precautions and policies; protect yourself and crew.
- Notify Terminal Manager or senior staff on scene:

Juneau Terminal Office	907-586-1276
Douglas Island Terminal Office	907-586-4400
Kieran Smith, Terminal Manager	907-723-9923
- Protect the public; get local police assistance for public safety if necessary (see Table 1.2-2 for contact information)
- Call fire department if there is a fire threat (see table 1.2-2 for contact information).

STOP THE FLOW

- Follow shutdown procedures.
- Stop pumps and close valves.
- Block drainage routes.

INITIATE CONTAINMENT

- Deploy boom for spills on water.
- Block flow on land; stop oil from reaching water.

ASSESS

- Spill volume
- Spill movement
- Weather, tide, and sea conditions
- Note environmentally or economically sensitive areas likely to be impacted by the spill

NOTIFY THE P49 OFFICE

- Report damage or injuries.
- Call for any assistance required.
- Report the size and nature of the spill.

The Incident Commander (IC) is responsible for making sure that needed notifications are made. The IC may either do it himself (or delegate this to his staff) or he may ask the assistance of the Qualified Individual (QI) (see Table 1.2-5 Qualified Individuals).

Section 1.2 Reporting and Notification

18 AAC 75.449(a)(2)

Use the table below to make notifications and to log the calls. Blank lines are left for you to log other calls. You must report any spill that threatens to enter the water, or is in the water, to the National Response Center (NRC), to the Coast Guard, and to the Alaska Department of Environmental Conservation (ADEC). Figure 1.2-1 ADEC Spill Reporting Placard gives instructions about the requirements for reporting to ADEC. The Terminal Manager or the Qualified Individual are responsible for notifying ADEC. See Table 1.2-3 for the Terminal Manager's name and phone number. QIs are identified in Section 1.2.1.

Table 1.2-1 Initial Notifications

Agency	Contact	Time/Person Contacted
Alaska Department of Environmental Conservation (ADEC): Juneau	907-465-5340 (business hours) 800-478-9300 (24 hours)	
National Response Center (NRC)	800-424-8802 (24 hours)	
USCG Sector Juneau	907-463-2980	
Environmental Protection Agency (EPA)	907-271-5083 (business hours) 206-553-1263 (24 hours)	
Primary Response Action Contractor		
SEAPRO	907-225-7002 888-225-7676 (24 hours)	

Table 1.2-2 Local and Other Emergency Notifications

Name	Phone No.
Juneau Police, Fire, and Medics	911
State Troopers	907-465-4000
City and Borough of Juneau (CBJ)/City Manager	907-586-5240
CBJ Water	907-586-0393
CBJ Harbormaster	907-586-5255
Bartlett Memorial Hospital	907-586-2100
Alaska Elect. Light & Power	907-780-2222
Airport Manager	907-789-7821
Douglas Island Pink and Chum, Inc. (DIPAC) Hatcheries	907- 463-5114
Trucano	907-907-2444
Juneau Raptor Center	907-586-8393
Juneau Municipal Manager	907-586-0221
State Emergency Response Commission (SERC)	907-428-7000

Table 1.2-2 Local and Other Emergency Notifications

Name	Phone No.
National Weather Service, Weather reporting	907-586-3997
FAA, Local weather and flight service	907-789-7351
KTOO Radio	907-586-1670
Additional Emergency Contacts	
Kirk Leadbetter, Marsh USA (Insurance Broker)	907-276-5617 907-276-6292 (fax)
Stericycle Environmental Solutions	907-272-9007
Wildlife Response and Resources	
National Marine Fisheries Services (NMFS)	907-586-7630 907-586-7285 (alternate)
Alaska Department of Fish and Game (ADF&G)	907-465-4105 907-465-6384 (alternate)
US Fish and Wildlife Service (USFWS)	907-242-6893 907-750-8527 (alternate)

Table 1.2-3 Facility Response Team

Name	Work	Cell	Responsibility
Kieran Smith	907-586-4400	907-723-9923	Incident Commander/Logistics
Peter Bibb	907-586-4400	907-321-5037	Alternate Incident Commander/Deployment skiff operator
Matthew Emmal	907-586-4400	805-788-9348	Deployment skiff operator
Ashley Christian	907-586-4400	907-635-0399	Communication & documentation
Kalcy Richter	907-586-4400	503-358-7449	Communication & documentation
Rigdon Hermann	907-586-4400	541-500-5068	Boom deployment/skimmer operator/skiff operator
Leslie Marsden	907-586-4400	907-821-4362	Boom deployment/skimmer operator/skiff operator
Caleb Howard	907-586-4400	907-957-0615	Boom deployment/skimmer operator/ skiff operator
Nathan Block	907-586-4400	907-723-8560	Boom deployment/skimmer operator/ skiff operator

Table 1.2-4 State and Federal Agency Notifications

Area of Responsibility	Agency/Address	Contact(s)
General oversight, Alaska Regional Response Team (ARRT)	U.S. Dept. of the Interior 1101 E. Tudor Rd. Anchorage, AK 99501	Regional Environmental Officer 907-786-3834
Migratory birds ¹ , bald and golden eagles, marine mammals (including sea otters, walruses, polar bears) ² , National Wildlife Refuges	U.S. Fish and Wildlife Service (USFWS) 1011 E. Tudor Rd. Anchorage, AK. 99506	USFWS Regional Spill Response Coordinator 907-242-6893 (24 hour) Email: fwsakspillresponse@fws.gov
Marine mammals (including whales, porpoises, seals and sea lions) ³	National Marine Fisheries Services (NMFS) Federal Building, Room 453 222 W. 7th Ave., #43 Anchorage, AK. 99513-7577	Sadie Wright (Juneau) 907-586-7630 (work)
General oversight ⁴ , migratory birds, terrestrial mammals, fish habitat permit ⁵	Alaska Dept. of Fish & Game (ADF&G) 333 Raspberry Rd. Anchorage, AK. 99518	907-267-2805 (work) 907-267-2342 (alternate)
Temporary waste and oil storage sites, construction, transporting contaminated soils, and burning waste ⁶	Alaska Department of Environmental Conservation 410 Willoughby Ave., Ste. 303 Juneau, AK. 99811	907-269-7510 (Anchorage) 1-800-478-9300 (24 hour)
State-owned lands and interests ⁷	Alaska Dept. of Natural Resources (ADNR) Div. of Mining, Land and Water Statewide Abatement of Impaired Land (SAIL) Section	907-465-3513 Email: dnr.scro.spill@alaska.gov
Historic, cultural, or archeology sites ⁸	Alaska Department of Natural Resources Office of History and Archeology (DNR-OHA) 550 West 7th Ave. Ste. 1310 Anchorage, AK. 99501	907-269-8700
NOAA trajectory projections	National Oceanic Atmospheric Administration (NOAA) 49000 Army Guard Rd., Ste. G216 JBER, AK. 99505	907-428-4143

^{1-4.} See Table 1.2-7 for permits and authorizations.

^{5.} Onshore activities involving a fish stream require ADF&G permitting. Title 16 fish habitat permit is required to boom the mouth of a fish stream or for other activities in a fish habitat.

^{6.} Approval is required for temporary waste and oil storage sites, transporting contaminated soils, and burning waste.

^{7.} DNR requires a permit for activities that exceed the Generally Allowed Uses of State Land described in 11 AAC 96.20.

^{8.} DNR-OHA requires a permit for work on archeological sites on State land. Contact the State Archaeologist. See Appendix A for Alaska Cultural Resources Permit Application.

Report Oil and Hazardous Substance Spills

TOLL-FREE	1-800-478-9300
INTERNATIONAL	1-907-269-0667
ONLINE	ReportSpills.alaska.gov



It's Required by Alaska Law!

(AS 46.03.755, AS 46.03.450, 18 AAC 75.300, 18 AAC 75.325)

Oil and Petroleum Product Reporting

Spills to Water

- Any amount spilled to water must be reported **immediately**.

Spills to Land

- Spills in **excess of 55 gallons** must be reported **immediately**.
- Spills in **excess of 10 gallons but less than 55 gallons** must be reported within 48 hours.
- Facilities shall maintain a spill log and report a record of oil discharges from **1 to 10 gallons** monthly.

Spills to Impermeable Secondary Containment

- Spills in **excess of 55 gallons** must be reported within 48 hours.

Hazardous Substance Reporting

Any hazardous substance spill, other than oil, must be reported **immediately**.

Underground Storage Tank (UST)* Reporting

You must report a suspected below ground release from a UST system, in any amount, within 24 hours. (18 AAC 78.212)



Alaska Department of Environmental
Conservation
Division of Spill Prevention and Response
<https://spills.alaska.gov>

If a release is suspected the owner or operator of a UST shall investigate the UST site and shall report to the UST Unit within the period specified. (18 AAC 78.200)

Contact us: (907) 465-5250

* Regulated UST as defined in AS 46.03.450(8)

Revised 10/10/2022

Figure 1.2-1 ADEC Spill Reporting Placard

**DO NOT DELAY INITIAL NOTIFICATION TO THE NATIONAL RESPONSE CENTER
PENDING THE COLLECTION OF ALL INFORMATION**



**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION FORM**

ADEC USE ONLY

ADEC SPILL #:		ADEC FILE #:		ADEC LC:	
PERSON REPORTING:		PHONE NUMBER:		REPORTED HOW? (ADEC USE ONLY) ☐ Phone ☐ Fax ☐ PERS ☐ E-mail	
DATE/TIME OF SPILL:		DATE/TIME DISCOVERED:		DATE/TIME REPORTED TO ADEC:	
INCIDENT LOCATION/ADDRESS:		DATUM: ☐ NAD27 ☐ NAD83 ☐ WGS84 ☐ Other: _____		PRODUCT SPILLED:	
		LAT. _____			
		LONG. _____			
QUANTITY SPILLED: ☐ gallons ☐ pounds		QUANTITY CONTAINED: ☐ gallons ☐ pounds		QUANTITY RECOVERED: ☐ gallons ☐ pounds	
POTENTIAL RESPONSIBLE PARTY:		OTHER PRP, IF ANY:		VESSEL NAME:	
Name/Business:				VESSEL NUMBER:	
Mailing Address:					
Contact Name:				> 400 GROSS TON VESSEL:	
Contact Number:				☐ Yes ☐ No	
SOURCE OF SPILL:				CAUSE CLASSIFICATION:	
CAUSE OF SPILL:		☐ Under Investigation		☐ Accident ☐ Human Factors ☐ Structural/Mechanical ☐ Other	
CLEANUP ACTIONS:					
DISPOSAL METHODS AND LOCATION:					
AFFECTED AREA SIZE:	SURFACE TYPE: <i>(gravel, asphalt, name of river etc.)</i>		RESOURCES AFFECTED/THREATENED: <i>(Water resources, wildlife, wells, etc.)</i>		
COMMENTS:					

ADEC USE ONLY

SPILL NAME:		NAME OF DEC STAFF RESPONDING:		C-PLAN MGR NOTIFIED? ☐ Yes ☐ No	
DEC RESPONSE: ☐ Phone follow-up ☐ Field visit ☐ Took Report		CASELOAD CODE: ☐ First and Final ☐ Open/No LC ☐ LC Assigned		CLEANUP CLOSURE ACTION: ☐ NFA ☐ Monitoring ☐ Transferred to CS or STP	
COMMENTS:		Status of Case: ☐ Open ☐ Closed		DATE CASE CLOSED:	
REPORT PREPARED BY:					
DATE:					

Revised 6/16/2014

Figure 1.2-2 Oil and Hazardous Substances Spill Notification Form

All petroleum discharges will be reported as soon as possible to the Terminal Manager who will become the Initial Incident Commander. The Terminal Manager is:

Name: Kieran Smith
Office: 907-586-4400
Cell: 907-723-9923

The Initial IC will initiate the response in accordance with the Emergency Action Checklist in Section 1.1. The Initial IC will notify all required federal, state, and local agencies as detailed in Section 1.2. The USCG and the National Response Center will be notified if a spill is to navigable water or adjoining shorelines or threatens to contaminate water. Immediate response actions will begin while the reporting is being carried out. The Initial IC is responsible for keeping a log of events, communications, and instructions received from agencies concerning a discharge.

Section 1.2.1 Qualified Individuals

18 AAC 75.449(a)(2)

Duties and Authorities

QI and alternates meet the USCG requirements of 33 CFR 154.1026 and the EPA requirements of 40 CFR Part 112.20(h)(3)(ix).

The CEO of P49 vests in the QI's authority to implement this plan as required in the citations above. The USCG requirements include authority to activate contracting resources, act as liaison with federal and state on-scene coordinators, and commit the funds necessary to conduct a response. In addition to the duties described above, the EPA requires the QI to notify all facility and response personnel; to identify the source and volume of the spill; to assess the impact of the spill and provide the assessment to response personnel; to implement response actions; to coordinate rescue actions; and to direct response activities until relieved.

To contact the QI on duty, call the Anchorage office, 907-562-5000, during and after hours. The answering service will contact a QI for you.

Table 1.2-5 Qualified Individuals

Name	Office	Cell Phone
David Simmerman	907-865-2325	907-315-6276
Mathew Lindsey	907-865-2303	907-250-5935

Section 1.2.2 Permits

Even if a permit were not required, it might be necessary to get the agency's permission for access. See Table 1.2-4 for state and federal contacts that would issue permits for activities related to oil spill cleanup. Additionally, see Section 1.6.8 for specific information on decanting and the permit that is required. See Table 1.2-7 for permits required for wildlife response activities during oil spill cleanup activities. See the Alaska Spill Response Permits Tool page

for more information on applicable permits (a link to this website is provided in Section 3.11 of this plan).

If federal lands were affected, a land use permit would be required for access. Authorizations required for carcass collection, hazing/deterrence, and capture of wildlife are tabulated on the next page.

Excluding those lands conveyed or withdrawn, the State of Alaska DNR manages most tidelands and submerged lands from the line of mean high tide and seaward to a line three nautical miles distant from the mean low tideline. In addition, DNR manages most shorelands below ordinary high water, and over 100 million acres of uplands spread throughout the state. Spills impacting DNR land call for notification, consultation, and coordination with DNR. Certain response activities on state land may require permitting from DNR. Such activities include those that go beyond uses that are Generally Allowed, e.g., anchoring a response vessel in the same location for more than 14 days or using heavy equipment on state land. To inquire about whether a spill is impacting state land or if response strategies require permitting, please contact DNR.

Under AS 30.30.010, the abandonment of a vessel on waters or lands of the state without the consent of the state agency having jurisdiction is prohibited. Should the vessel sink or ground on state land, the vessel must be removed as soon as it is safe to do so. For questions about vessel removal requirements contact DNR.

Table 1.2-6 State and Federal Permits for Wildlife Response Activities

Activity	Migratory birds	Sea otters, walruses, and polar bears	Whales, porpoises, dolphins, seals, and sea lions	Terrestrial mammals, furbearers, and non-migratory birds	Fish, shellfish, and invertebrates	Bald or golden eagles	Threatened or endangered species¹
Carcass Collection	USFWS Migratory Bird Salvage Permit & OLE Authorization ²	USFWS Permit & OLE Authorization ²	NMFS MMHSRP Permit ³	ADF&G Wildlife Response Permit	ADF&G Wildlife Response Permit	USFWS Permit & OLE Authorization ²	NMFS/USFWS ESA section 7 consultation ⁴ & USFWS OLE Authorization ²
Haze/Deter	ADF&G Wildlife Response Permit	USFWS MMPA Authorization	NMFS MMHSRP Permit ³	ADF&G Wildlife Response Permit	N/A	USFWS Eagle Depredation Permit	NMFS/USFWS ESA section 7 consultation ⁴
Capture, Transport, Stabilize, or Rehabilitate	USFWS Migratory Bird Rehab Permit	USFWS MMPA section 112(c) LOA	NMFS MMHSRP Permit ³	ADF&G Wildlife Response Permit	N/A	USFWS Eagle Depredation Permit	NMFS/USFWS ESA section 7 consultation ⁴
Acronyms: ADF&G = Alaska Department of Fish and Game; EPA = U.S. Environmental Protection Agency; ESA = Endangered Species; LOA = Letter of Authorization; MMPA = Marine Mammal Protection Act; MMHSRP = Marine Mammal Health and Stranding Response Program (NMFS); NMFS = National Marine Fisheries Service; OLE = Office of Law Enforcement (USFWS); USCG = U.S. Coast Guard; USFWS = U.S. Fish and Wildlife Service <i>Note:</i> See Initial Emergency Contacts in the WPG for a list of agency personnel to contact for appropriate authorizations and permits.							

Source: Table 4-1 in the Wildlife Protection Guidelines for Oil Spill Response in Alaska (ADEC 2024d)

¹ An ADF&G permit is required to deter, collect, or hold any species on the state endangered species list that is not on the federal endangered species list.

² For species managed by USFWS (i.e., migratory birds, eagles, sea otters, walruses, and polar bears).

³ Request verbal case-by-case authorization from the NMFS Regional Stranding Program Coordinator or associated co-investigator.

⁴ ESA section 7 consultation between federal action agencies (i.e., USCG or EPA) and consulting agencies (USFWS and NMFS).

Section 1.3 Safety

18 AAC 75.449(a)(3)

The Safety Officer (SO) is the Terminal Manager.

Name: Kieran Smith
Office: 907-586-4400
Cell: 907-723-9923

The Safety Officer is responsible for preparing an Incident Safety Plan based on the assessment of the guidelines discussed below in the initial site characterization. The Incident Safety Plan form is located in Appendix B of this plan.

The Safety Officer is responsible for monitoring safety during a spill response and developing measures for protecting the safety of personnel. The Safety Officer will correct unsafe activities or conditions through the regular line of authority, although the Safety Officer has the authority to stop or prevent unsafe acts when immediate action is required.

Specific duties of the Safety Officer include:

1. Check in at the Incident Command Post and receive briefing from Incident Commander.
2. Organize work area.
3. Brief and assign duties to subordinates.
4. Identify hazardous and unsafe situations associated with the spill response.
5. Participate in the planning meetings to identify any health and safety concerns inherent in the Incident Action Plan (IAP).
6. Prepare the safety message for the Incident Action Plan.
7. Exercise emergency authority to stop or prevent unsafe acts.

Investigate accidents that occur within the spill response area of activities. In developing a site-specific safety plan using the following model, all government safety standards will be followed.

They include:

- 29 CFR Part 1910, Occupational Safety & Health Standards
- 29 CFR Part 1904, Record Keeping and Reporting Occupational Illnesses
- 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response
- 29 CFR Part 1910.132-37 Subpart 1, Personal Protective Equipment
- 29 CFR Part 1910.38, Employee Emergency Action Plans and Fire Prevention Plan
- 29 CFR Part 1910.1200, Hazard Communication Standards

State of Alaska Department of Occupational Safety & Health standards (8 AAC 61):

- a) Subchapter 1, General Safety Code
- b) Subchapter 4, Occupational Health & Environmental Control Code
- c) Subchapter 5, Construction Code
- d) Subchapter 8, Petroleum Code

- e) Subchapter 10, Hazardous Waste Operations and Emergency Response
- f) Subchapter 15, Hazard Communication Code

Air Monitoring

If the Terminal Manager is concerned about the air quality, before allowing people to enter the spill site and begin the response, the air will be checked by the local fire department. A lower explosive limit (LEL) meter will be used to detect whether an explosive danger exists and whether there is sufficient oxygen present for people to enter safely. Benzene is not an issue with a diesel spill. If there is a large gasoline spill, the area will be quarantined, and no response will be undertaken until all safety issues are addressed. These include explosive levels, oxygen, and all aromatics such as benzene, toluene, and total hydrocarbons.

Information on Oil and Hazardous Material

Safety Data Sheets (SDS) provide procedures for handling or working with hazardous material in a safe manner. They include physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures. SDSs for hazardous product, stored at the Juneau and Douglas Island Terminals are available in the office to anyone needing one. SDSs are also included in Appendix C of this plan.

Section 1.4 Communications

18 AAC 75.449(a)(4)

The communication management plan will be formed under the ICS using the SEAPRO's Technical Manual. A communication unit leader will report to the Service Branch Director in the Logistics Section. He will supervise the communication unit and develop plans for using the communication resources to meet the incident requirements.

When SEAPRO is mobilized, the Communication Unit Leader will coordinate his communication plan with SEAPRO's Communication Coordinator. The Communication Unit Leader will determine the requirement for expanded telephones, fax machines, cell phones, and radios.

A radio communication plan will assign equipment and frequencies for the field units. The Communication Unit Leader will assign equipment and frequencies. If more communication equipment is required, the Communication Unit Leader will order what is needed. The radio requirements worksheet (ICS 216, located in Appendix B of this plan) is used to assign radios.

Marine radio service is available for ship-to-ship and ship-to-shore communication. Call the marine operator to use the service. This service uses either Marine VHF or single sideband radios connected to the telephone system. The service in Juneau is available through the marine operators listed below.

Station	VHF Channel	Marine Operator	Phone Number
Juneau (south)	26	ALASCOM	907-422-2628
Juneau, Lena Point, Auke Bay, and West	25	ALASCOM	907-434-2628

Section 1.4.1 Operational Communications

During large spill response operations when many crews are involved and the response contractor is mobilized, the communication system employed by SEAPRO will be adopted. This system follows the Incident Command System (ICS) guidelines. Radio frequencies and communication equipment will be assigned by the Communication Unit Leader operating within the Service Branch of the Logistics Section.

For small spills, adequate communication requires two or more portable VHF radios. The big spill scenario involving a command center, etc. will require setting up the SEAPRO's expanded communication network. The Communication Unit Leader will oversee the communication center with its telephones (both fixed and mobile) radiotelephone, (VHF, UHF, Marine VHF, and Ground to Air), modems, facsimile machines, and satellite communications. The communication plan set forth in SEAPRO's Technical Manual, Section 1.4.b is the basis for communication. The Communication Unit Leader would modify this plan to meet the specific needs of the spill response.

Field communications is achieved with a combination of devices, including mobile and portable handheld radios. It will include a repeater if one is needed to extend area coverage.

Marine operations will use Marine VHF for communication. Most boats are equipped with Marine VHF radios and they monitor channel 16. SEAPRO has marine VHF radios that can be assigned to vessels if needed.

Aircraft are equipped with air to ground VHF radios and usually monitor channel 16. The SEAPRO plan calls for using local Unicom for air operations.

Table 1.4-1 Communication Equipment

Description	Qty	Frequency (MHz)	Location
Juneau Terminal			
MIDLAND VHF Base Station with Scanner	1	All VHF Frequencies Facility Frequency	Main Office
MAXON SP-2550 Hand-Held 5 watt Intrinsically Safe 10 Channel	3	Facility Frequency Weather Station WINGS OF AK FREQUENCY VHF Channels 16,7,8,10	Main Office
MOTOROLA & MIDLAND VHF	8	Facility Frequency VHF Channels	Delivery Trucks
VHF Base Station, chnls; private freq. 159.480MHz	1	10, 11, 16, 22, 68, 77, & 2, WX channels	Douglas Island Main Office
VHF portable, intrinsically safe, Motorola marine radios;	3	10, 11, 16, 22, 68, 77, WX channels freq.159.480MHz	Vehicles
VHF mobile radios in delivery trucks;	7	10, 11, 16, 22, 68, 77, WX channels, & freq. 159.480MHz	Douglas Island Main Office
Douglas Island Terminal			
VHF Base Station	1	10, 11, 16, 22, 68, 77, 2 WX channels; plus private freq. 159.480MHz	Office
VHF portable, intrinsically safe	3	10, 11, 16, 22, 68, 77, 2 WX channels; plus private freq. 159.480MHz	Office
VHF mobile radios in delivery trucks	7	10, 11, 16, 22, 68, 77, 2 WX channels; plus private freq. 159.480MHz	Vehicles
Telephones	3	907-586-4400 907-586-4405 907-586-3181	Office
Telephone	1	907-790-3030 907-586-4400 (office & Douglas)	Marina - Auke Bay, Douglas
Fax	1	907-586-4402	Office
Cell Phone	1	907-723-9923	Terminal Manager

Section 1.5 Deployment Strategies

18 AAC 75.449(a)(5)

The discharge planning volumes and tiered response requirements from the state and federal agencies are provided in Section 5.0 of this plan.

The deployment strategy identifies the specific deployment activities required to respond to the worst case discharges. Below is a table that summarizes how equipment and personnel could be mobilized to deploy enough resources to contain and recover the worst case spill in less than 72 hours. The scenario provided in Section 1.6.12 meets the planning standards for EPA, USCG, and the State of Alaska.

Section 1.5.1 Transport of Resources

18 AAC 75.449(a)(5)(A)

The Juneau Terminals may be accessed by air or waterway. Extreme weather conditions, or an earthquake might close the Juneau airport. In the event of such weather, reinforcements from other locations across Alaska could be delayed and should be transported by vessel instead. Local spill response resource locations are depicted on a site map in Section 1.8 and are listed in Section 3.6 of this plan.

Table 1.5-1 Resources Mobilization

Resource	Primary Transport Method	Est. Time to Scene	Alt. Transport Method	Est. Time to Scene
Juneau				
P49 Response Personnel	Personal Vehicle	0-20 min	N/A	N/A
P49 Owned Spill Response Equipment	Load into pickup truck and drive to location	0-2 hours	N/A	N/A
SEAPRO Spill Response Equipment	Load into pickup truck and drive to location	0-2 hours	N/A	N/A
SEAPRO Oil Response Barge	Barge	4 hours	N/A	N/A
Ketchikan				
SEAPRO Spill Response Equipment	Small Aircraft	6.5 hours	Barge	30 hours
Sitka				
SEAPRO Spill Response Equipment	Small Aircraft	11.5 hours	Barge	30 hours

Section 1.5.2 Primary Response Action Contractor Mobilization

18 AAC 75.449(a)(5)(B)

If necessary, the QI will request assistance from the Primary Response Action Contractor (PRAC) under the terms of the contract included in Section 3.7 of this plan. Below is a description of the interim actions to be performed until the PRAC initiates a full response to a discharge. To initiate mobilization of the PRAC, call SEAPRO.

Response Contractor:	SEAPRO
Address:	540 Water Street, Suite 201 Ketchikan, AK 99901
Phone:	907-225-7002
Toll free:	1-888-225-7676
Fax:	907-247-1117

When a worst case discharge occurs, the Terminal Manager acts as the Incident Commander and calls the QI. The IC briefs the QI on the situation. He reports the damages and injuries and lists the resources and assistance he needs to respond. The QI obtains all the information he needs to mobilize the requested assistance and the appropriate Spill Management Team. The QI will assist with notification if requested to do so by the IC.

The QI calls SEAPRO to request the specific assistance and resources he needs. To provide a written record, a resource order is signed by the QI for everything requested. The resource order is faxed to SEAPRO for confirmation of the order, and a copy is faxed to the IC so he knows what is ordered and when it is expected to arrive at the staging site.

Upon arrival of SEAPRO personnel, they will immediately be briefed on the spill and assigned to applicable task forces. Additionally, SEAPRO equipment will be staged and deployed where it is needed without interruption of any ongoing response actions.

SEAPRO may be asked to assign someone to be the liaison to the Logistics Section Chief to work out the details for mobilizing the equipment.

Details of how the equipment will be transported to Juneau are in the SEAPRO Technical Manual. SEAPRO will mobilize its own resources in accordance with their manual which is by reference a part of this plan.

Section 1.6 Response Scenario

18 AAC 75.449(a)(6)

Response strategies for oil spills are described in this section. This section is organized in two parts:

Presentation of General Strategies and Guidelines: Assists in the decision-making process by spill response personnel. These strategies are applicable to many different types of incidents. It is important to note that the actual procedures that will be followed will depend on the spill characteristics, weather, and other environmental conditions. These strategies are to be used as guidelines only.

Response Scenarios: Present the possible sequence of events and tactics that might occur in the event of a hypothetical oil spill. The worst case discharge scenario is intended to demonstrate compliance with the ADEC Response Planning Standards. See Sections 3.2.2 and 5.0 of this plan for all response planning standard calculations.

Section 1.6.1 Procedures to Stop the Discharge

18 AAC 75.449(a)(6)(C)

The following are descriptions of how to "stop the flow" for discharges from the Juneau Terminals. All these procedures may be executed immediately when a discharge is detected to minimize the amount of discharge entering the water.

Failure of manifold or hose during transfer

- Person-in-Charge shuts down the transfer.
- Dock man deploys sorbents to contain spill.
- Manager supervises activities and mobilizes resources required.
- Dock man blocks any path of spill oil could take to the water.

Tank overfill

- Person-in-Charge shuts down the transfer.
- Person-in-Charge shuts down all ignition sources.
- Person-in-Charge calls manager.
- Manager organizes tank trucks to recover and return fuel to tanks.

Tank failure

- Person-in-Charge stops the transfer.
- Person-in-Charge shuts down all ignition sources.
- Manager supervises activities and mobilizes resources required.
- Manager organizes transfer of the fuel to another tank.

Pipeline rupture

- Dock man stops all pumps on the pipeline.
- Person-in-Charge closes the valves to stop the flow.
- Manager supervises activities and mobilizes resources required.
- Person-in-Charge and Dock man contain spilled fuel with sorbents.
- Person-in-Charge blocks all flow routes to the water.

Pipeline leaking

- Person-in-Charge closes valves to stop the sources.
- Person-in-Charge turns off any pumps in operation.
- Person-in-Charge applies temporary patch on the pipeline.
- Dock man contains the spill with sorbents and blocks all flow routes to water.

Explosion or fire

- Person-in-Charge or Manager calls 911 to report fire
- Manager shuts off all ignition sources.
- Manager evacuates the plant or area in flames.
- Manager secures the area to keep the public out.
- Follow fire prevention and control measures in Section 1.6.2.

Pump casing failure

- Person-in-Charge shuts off the pump.
- Person-in-Charge shuts off all ignition sources.
- Dock man closes all valves to stop the flow.
- Dock man deploys sorbents to contain the oil and block flow routes to the water.
- Manager supervises activities and mobilizes resources required.

USCG Average Most Probable Discharge (USCG planning standard is one barrel)

- Person-in-Charge and Dock man place 40 feet of Sea Curtain boom around spill.
- Dock man gets sorbent pads to recover oil from water.
- Person-in-Charge notifies Manager who make notifications.
- Dock man and Person-in-Charge double bag oily sorbents for disposal.

Specific Procedures for Juneau Terminal

The initial responder will shut down the nearest valves, based on the source of the discharge. There are at least four valves along the pipeline between the tank and cargo or delivery points. As soon as practical, the initial responder will shut the next valves up the line from the first valve shut or contact facility personnel closer to that valve to affect that closure.

If the spill occurs during a transfer from a barge to the facility, the pumps on the barge will be shut off by the emergency shut-off switch located at the fuel transfer station on the barge. A Person-in-charge (PIC) is always within 60 seconds of that switch during a transfer.

Sorbent materials will be initially deployed in temporary berm configurations to contain discharged oil. On land, gravel substrate can be configured to construct berms to prevent the discharge from flowing into the water or migrating to drainage paths.

For a spill on the dock, sorbents deployed on the dock will be used to prevent oil from leaving the dock and entering the water.

The Facility has an internal drainage system, which leads runoff into an oil-water separator.

Specific Procedures for Douglas Island Terminal

To stop a discharge of product at the marine header, three sets of valves are available. These valves are located before the meter, beside the approach to the dock, and at the tank in the tank yard. Always close the valve closest to the point of discharge to minimize the volume of discharge.

To stop a discharge of product from the pipelines and service hoses on the fuel float, valves are located before the meter, beside the approach to the float, and at the tank in the tank yard.

To stop a discharge of product from the TTLR, use the valves located before the meter, under the loading rack, and at the tank in the tank yard. By closing any of these valves, the discharge will stop. Two other methods of stopping a discharge in this area are closing the valve held open while filling a tank truck and turning off the product pump. This pump is used to pump the product from the storage tank into the truck. A switch for each product is located at the top of the stairs on the loading rack and a master switch is in the electrical room located behind the warehouse. The tank truck loading rack is surrounded by a containment area, which drains into an oily water separator. When it is necessary, the containment borders may need to be increased to contain a larger amount of product to prevent or stop a discharge into the environment.

A discharge of product from the storage tanks inside the tank yard will be contained in the secondary containment. If the leak is in the tank shell, reduce the level of product below the leak. Small leaks may be temporarily patched. Large holes in the shell may not be stopped until the product is below the level of the hole.

Compression sleeves will be applied to leaking pipe to stop leaks. The sleeves are tightened until flow is stopped. Repair sleeves for the various pipe sizes are available at the plant.

To stop a discharge from a leaking hose, stop the flow to the hose by shutting off pumps and closing valves up stream.

Section 1.6.2 Fire Prevention and Control

18 AAC 75.449(a)(6)(D)

The personnel safety section of this plan deals generally with fires and safety procedures. In general, fire response procedures are:

1. Isolate and terminate source of fire (for example, stop fuel transfer).
2. Eliminate all ignition sources.
3. Designated person should:
 - a) Notify local Fire Department via 911
 - b) Evacuate and account for personnel in area
 - c) Alert vessels at dock to move, if necessary, into open water, and
 - d) Alert any tank trucks at loading rack (TTLR) to move from the area
4. If fire is too large to be extinguished in 15 seconds with the facility's extinguishing equipment, evacuate the area completely.
5. No one may enter a hot zone without authorization.

6. Use non-sparking tools when working in a hot zone.
7. Use intrinsically safe radio equipment in the hot zone.

Related general safety procedures, such as testing areas with explosion meters when there is a potential fire or explosion threat and establishing an exclusion and safety zone at an incident, are also relevant to all facilities and explained in Section 1.3. Location of fire fighting equipment is provided in Section 1.8 of this plan.

Fire Suppression System

The Terminal Manager, or his alternate, is the firefighting coordinator at the Juneau Terminals. The firefighting coordinator will notify the fire department if there is a risk of, or an actual fire, or explosive atmosphere.

Fire extinguishers rated AB of 20 lb. or better are located throughout the facility. See Section 1.8 for fire extinguisher locations.

Juneau Terminal: There is a freshwater hydrant (six-inch line) connected to the city main is located at the northeast corner of the warehouse. A 2-½-inch service line continues to the warehouse. From there a one-inch line supplies water to the dock and to the two garden hoses located on the float.

Douglas Island Terminal: The Douglas Island Terminal has a foam fire suppression system, which can suppress flammable vapors to prevent or extinguish fire. Therefore, at the Douglas Island Terminal, the first step to prevent or fight fires too large for handheld fire extinguishers is to activate the foam system rather than shut off electrical power.

If the electric power needs to be shut off, open the main breaker. Electricity can be shut off to parts of the facility by opening selected breakers in the electrical panel in the electrical control building.

The foam fire suppression system at the Douglas Island Terminal uses a low expansion foam for the product tanks, pump/motor area, secondary containment, and the TTRL. Except for the TTRL and the pump/motor area, heat sensors automatically trigger the foam system.

When activated, the foam system alerts the fire department and sounds an audio-visual alarm. The facility has three manual pull box fire alarms – two by the TTRL and one by the foam control building. If these manual alarms are set off, the fire department is alerted and the audio-visual alarm sounds at the plant.

The foam fire suppression system complies with National Fire Protection Association (NFPA) standards for low expansion foam and applicable City and Borough of Juneau requirements. The foam is UL listed film-forming foam with three percent concentrate, no polar additives, and is suitable for minus 15°F. It has a minimum shelf life of 10 years. A 1,000-gallon atmospheric tank contains enough foam for operation and testing including a 20 percent reserve. There are also tank foam maker chambers on each tank and secondary containment foam makers. All foam system components are operated from a control board in the foam fire suppression building. The system is inspected annually by a certified third-party inspector.

If there were a product discharge, particularly if it is a volatile product like gasoline or aviation fuel, electricity at the facility would be shut off and ignition sources prevented. This status would remain until it was verified that wind had dissipated any fire hazard in the vicinity of the spill. If appropriate, occupants of downwind structures, and/or marine traffic would also be immediately notified to control any ignition sources.

Section 1.6.3 Surveillance and Tracking

18 AAC 75.449(a)(6)(E)

Tracking of the discharge will begin immediately. This will allow forecasting of where the discharge will go, and which shores and areas may be impacted. During the forecasting, clean-up crews and shoreline protection methods can be determined and put into place. It is important to label and retain plots in sequence, together with the available meteorological and oceanographic data, to permit appropriate review and study.

A release to land will be tracked visually from a safe place on land with use of trucks or other vehicles if necessary. If it is safe to do so, the top of a tank within the tank farm would provide a good vantage point for tracking the release.

During the initial actions taken after a discharge, tide and wind information will be gathered and used to determine the direction the discharge will travel. During hours of darkness, this may be the only way to estimate the direction of travel. During daylight hours, the use of marine vessels and aircraft will be the most effective. To order aircraft for aerial surveillance call:

Business Name	Local Number
TEMSCO Helicopters	907-789-9501
Coastal Helicopters	907-789-5610
NorthStar Helicopters	907-586-2030

Through the contract with SEAPRO, a waterproof drone may be used for aerial surveillance. This is the preferred method for aerial tracking because it is safer and logistically simple to transport to a spill site.

TEMSCO helicopters will provide aerial tracking capabilities through an MOU with SEAPRO. TEMSCO has ensured they have the following aircrafts available at the following locations to meet the oil tracking requirements of 33 CFR § 154.1045(j). Contact information is also provided below.

Description	Asset Type	Quantity	Location
Helicopter	MD 500	8	SE Alaska
Helicopter	AS 350	18	SE Alaska
Helicopter	AS 350 B2	1	SE Alaska

Source: (SEAPRO 2022)

At the direction of the Unified Command, the USCG will request trajectory projections from the National Oceanic Atmospheric Administration (NOAA). See Table 1.2-4 for NOAA contact information.

See STAR Manual, Section B-II-1 Plume Delineation, Land or Section B-II-2 Discharge Tracking On Water for more information.

Oil moves with the surface current. Wind will push the oil along the surface at about three percent of the wind speed. The slick will spread as it moves. As a result, the discharge will assume a "teardrop" shape and the advancing front of the slick will become wider.

Diesel moves downstream with a current at the same speed that the surface waters are moving. Wind will influence the movement of a slick by pushing it or opposing it, depending on current direction, at about three percent of the wind speed. There will be some tendency for the slick to spread laterally as it moves down current due to the tidal, viscous, and surface tension forces at work. As a result, the discharge will assume a "teardrop" shape so that the moving front of the slick will become increasingly wider downstream from the origin of the discharge.

Marine charts of Gastineau Channel and of the surrounding area are kept in the office for tracking the progress of any oil spill.

Section 1.6.4 Protection of Environmentally Sensitive Areas

18 AAC 75.449(a)(6)(F)

Sensitive environments near the facility are described in Section 3.9. This includes a prioritized list of sensitive environments and public resources and a brief description of the measures to be employed to protect these areas in the event of a spill. Protection of environmentally sensitive areas and areas of public concern is a response priority and will begin as soon as it is determined that the discharge has the potential to contact these areas. Refer to STAR Manual Section B-III-12 to B-III-15 for further information.

Surface Geology and Soils

The Juneau Terminals are located along Gastineau Channel. The area is characterized by poorly drained soils that have formed compact glacial till along the lower mountain slopes. Typical textures range from silt loam to very gravelly loam above a firm glacial till. Coarse grained sand beaches and rock cobble beaches are interspersed throughout the area (NOAA 1992). The Douglas Island Terminal sits on an extensive fill area. The fill sits on impermeable hard blue clay. At the facility, this clay layer is found approximately eight feet below the surface up by the Douglas Highway and about 30 feet below the surface by the channel. Surface water and groundwater in the area is trapped by the clay and seeps out into the channel. The fill below tank 1-4 was excavated down to the hard blue clay (eight to 18 feet) and backfilled with acceptable fill material out to about 10 feet beyond each tank pad. Beneath tanks 5-10, pilings were driven to firm bearing to support the tanks and pad.

Fisheries, Processors, and Hatcheries

There are a number of fisheries, processors, and hatcheries active in Juneau. Their operating times throughout the year can vary. The Terminal Manager has knowledge of the opening and closings of the fisheries and processors in the region. Should one or more of the operating fisheries, processors, or hatcheries be threatened in the event of an oil spill, deflection boom

will be deployed to protect the site(s). To accommodate the currents in Gastineau Channel, the boom will be deployed in a cascade arrangement and will be maintained throughout tide changes.

The DIPAC Hatchery is located northwest and across the Gastineau Channel of the Douglas Island Terminal and the Sheep Creek net pen is located south of the Juneau Terminal. The hatchery and net pen would be notified immediately if it were threatened by a release from the bulk plant.

Drinking Water Sources:

Drinking water sources are discussed in Section 3.2.3 and 3.9.3 of this plan.

Section 1.6.5 Containment and Control Strategies

18 AAC 75.449(a)(6)(G)

The strategy is to contain the discharge first and to control what oil escapes containment to prevent it from impacting the shore. The most sensitive shorelines will have the highest priority for protection. The least sensitive shorelines may be used for collection and recovery of the oil that escapes initial containment.

On Land

The first priority for any oil spilled on land is to prevent it from getting to the water. Most spills will likely be contained by use of absorbents. Sufficient barriers could be built quickly with absorbents or other material, and cleanup could start immediately. Land containment techniques are described below and refer to STAR Manual Sections B-III-3 and B-III-4 for more information.

Wherever equipment must be manhandled, for example at deployment sites and collections sites, the terrain should be considered. Level terrain with good footing is important for personnel carrying or handling heavy equipment such as skimmers, booms, drums, etc. Personnel should not be required to carry skimmers or other heavy equipment over irregular or steep terrain. Many injuries such as slips, trips, falls, sprains, and other more serious injuries can be avoided by selecting level ground with good footing.

Berms – If a spill is flowing in a depression or ditch, construct a simple berm from earth, rocks, logs, debris and other readily available materials and cover with impermeable liner. If there is any flow of water into the containment area, water pooling may present a serious problem. As the water level rises, the oil floating on the surface may spill over the berm and defeat its purpose. If pooling is anticipated, incorporate a water relief drain into the berm; a relief drain can be a length of pipe, hose, or conduit with a flow control valve to maintain the oil/water interface above the drain intake. Set the inlet end of the drain below the oil/water interface and the outlet end at the desired level of the pond.

Culverts – A culvert can be dammed by using available materials such as plywood, logs, timbers, debris, or other material. A relief drain should be employed in the culvert block if there is any flow of water into the pond. Suspend a sheet of plywood from stakes to provide adjustable water relief. The plywood can be lowered or raised to regulate the pond level.

Trenches – A trench can be an effective method of containing an oil spill, particularly if the oil is moving through a subsurface layer of soil or a vegetative mat. Dig the trench at a right angle to the flow of oil to a depth that exceeds the affected soil or vegetative layer. Place an impermeable liner around the lower side of the ditch.

Fence Barriers – If a spill occurs in an area where the oil does not percolate into a vegetative or soil layer, drive a fence barrier into the soil to block the flow of oil. Construct the barrier from sheet metal, corrugated roofing material, plywood or other suitable material. Dig sample holes before the barrier material is driven into the ground to determine the depth to which the barrier should be inserted.

On Water

Oil is contained on the water with containment boom. The boom is deployed around the oil. Sorbent boom should be placed inside the curtain boom to improve the effectiveness of the containment. If the slick escapes to open water before it can be contained, different techniques must be used. Boom must be deployed ahead of the slick in an attempt to capture it. An oil slick tends to spread out as it moves and to form a tear drop shape. It will move with the current at the same speed and with the wind at about three percent of the wind speed. STAR Manual Section B-III-2 has further information on the containment boom tactic.

To capture a slick on open water, two vessels are required. One vessel controls each end of the boom, which is deployed in front of the slick. The slick can then be captured by pulling the boom up to the slick and closing around it. The slick can then be held in place while a third vessel, with a skimmer or absorbents recover the oil; or it can be towed elsewhere for recovery. When sweeping or moving a slick in this manner, boom velocity should be less than one knot or the slick is liable to escape. Refer to STAR Manual Section B-III-6.

If the slick is not contained before reaching shore, it must be stopped from contaminating critical shores and then trapped against shores where impact would be minimal and cleanup easiest. Exclusion booming techniques are used for protection of critical shores. Where there is a long-shore current, exclusion booming is used. Refer to STAR Manual Sections B-III-12 and B-III-13 for further information on the diversion boom and exclusion boom tactics.

Nearshore

Spills on the water can occur from the dock or vessel during a transfer operation. If no dangerously volatile fuels are handled, the best action is to contain the slick as quickly as possible in the vicinity of the shore or dock. The general procedure is to use a floating containment boom to encircle the slick. Specific deployment methods depend on the situation. Generally, the containment boom can be attached to a pile at the dock or anchored onshore. The deployment skiff then tows the boom to encircle the slick. The second end is then tied to a dock pile or again anchored onshore. Refer to STAR Manual Section B-III-5 for further information.

Section 1.6.6 Recovery Strategies

18 AAC 75.449(a)(6)(H)

Spill Outside the Containment Area

P49 has enough equipment available under contract to recover the response planning standard in less than 72 hours. The strategy is to prevent any oil on land from getting to the water; to contain oil that is on the water; and to control the oil that escapes containment to prevent it from impacting sensitive areas. The resources to accomplish this are summarized in Section 1.5 and 3.6 of this Plan.

Spill Inside the Containment Area

In the event the largest tank discharges its entire volume, it would be contained in the containment area. The oil could either be pumped into tanks if the capacity existed. Otherwise, the oil could be pumped into a barge.

Uplands

If the spill is successfully contained on land, it can be recovered and possibly recycled. In case the oil is floating on pools of water, skimmers or absorbents can be used to recover it. Oil which has penetrated the soil must be recovered in accordance with a remediation plan approved by ADEC.

Shorelines

Spills that are not contained on the open water or on the uplands before reaching the water will contaminate the shoreline. The cleanup methods employed will depend on the type of shoreline affected. See Section 1.6.11 Shoreline Cleanup Teams, for detail on shoreline cleanup.

Open Water

To recover oil from water, it must first be contained. If the oil on the water is thick, weir skimmers can be used effectively to recover it. When the oil is in a thin film, it is better to use oleophilic skimmers. The skimmer will be placed in the containment area with the greatest concentration and thickness. Skimming operations will become inefficient when most of the spill has been removed. Sorbent materials will then be used to pick up the remaining oil.

Spills that have not spread over a large area or that have been driven into streamers by the wind and waves may be recovered using booms and skimmers. Small slicks may be successfully skimmed using two booms, 100 to 150 feet each, to concentrate the oil, with a skimmer boat to remove the oil. Streamers or "wind rows" which are the long parallel rows of oil created by wave action can be skimmed using this configuration beginning downwind and moving upwind along the streamer. The relative skimming velocity will not exceed one knot for these cases.

Sorbent materials will be used for small volume spills in calm seas and to pick up small quantities of oil that are difficult to remove with mechanical equipment, such as skimmers and

vacuum devices. Sorbent materials can present a recovery problem if they are placed in an area where tidal action, currents or winds cause them to float away. A tether line can be attached to the sorbent materials to aide recovery.

To increase the efficiency of sorbent materials, they will be moved and turned frequently, and caution will be exercised in removing them from the oil-contaminated area so that oil does not drip on to clean surfaces.

Section 1.6.7 Damaged Tank Transfer and Storage

18 AAC 75.449(a)(6)(I)

In the event of a damaged storage tank and fuel that needs to be removed from the tank, pumps will be used to transfer the fuel to alternate storage. Transfer to alternate storage within the tank yard will be accomplished with the tank farm piping. Alternate storage within the tank farm includes other tanks as listed in Table 3.1-1 with available ullage. Transfer to alternate storage outside the tank farm will be accomplished with the use of tank trucks. Alternate storage devices outside of the tank farm are listed in Section 1.6.12.1.2 of this plan. If a marine vessel is to be used as alternate storage, the transfer will be accomplished with the use of a pipe or hose. Variations to these procedures may be used if circumstances necessitate.

Section 1.6.8 Transfer and Storage of Recovered Oil

18 AAC 75.449(a)(6)(J)

The STAR manual marine and land-based tactics for storage and transfer of recovered liquid (STAR Manual Sections B-III-16 and B-III-17) are adopted for use in this plan. The primary storage for recovered liquid consists of bladders and three of SEAPRO's oil response barges (ORB) and bladders. In addition to bladders, tank trucks, tanker trailers, and portable tanks may be used for temporary storage. Full ORBs and bladders will be rotated with empty ones to minimize interruption of recovery operations.

Once the Petro Mariner barge (or similar contracted barge) arrives on scene, fuel is lightered to it from all full storage devices involved in the spill response.

Correct handling of oil and oily debris is imperative to prevent recontamination and to protect unaffected areas.

This plan provides sufficient temporary storage capacity to meet state and federal requirements. See Tables 1.6-3 and 1.6-4 for the total amount of liquid recovered during the response scenario.

Decanting

18 AAC 75.449(a)(6)(L)

Decanting is a method used to remove water from recovered liquid. Decanting is an option which may be used whenever temporary storage capacity is insufficient to hold all the recovered liquid. Application must be made to ADEC for a permit to operate a decanting system. Appendix A of this plan contains a decanting permit application. No decanting is allowed without an approved permit from the State of Alaska. See Section 3.11 Bibliography of this plan for a link to State of Alaska information on decanting.

Before decanting, the liquid must be allowed to sit for some time (generally 30 minutes) to permit settlement and separation of the oil and water (Ross 1999). Water is then removed from the bottom of the storage container. The water may be drained if the storage container has a bottom drain. Otherwise, the water may be pumped from the bottom of the container through a suction hose inserted through the oil into the water at the bottom of the container. The discharged water should be returned to the recovery area so any oil accidentally discharged will be recovered (Ross 1999).

To determine the amount of water versus oil in a temporary storage container use a method called "sticking the tank." This means sounding the container with a stick or rod with "Kolor Kut" paste (or another similar product) on it. Kolor Kut paste will change color when it comes in contact with water, thereby indicating the level of water in the container. Standard operating procedure is to leave some water in the container to avoid losing any recovered oil. Leaving 20 percent of the water in the container will conservatively prevent oil from being discharged during decanting.

Barge Storage of Recovered Oil

The Petro Marine barge (or similar contracted barge) will arrive in Juneau within 27 hours of being requested and will be available for additional temporary storage and oil collection upon arrival in addition to accepting lightered fuel from the damaged tank and secondary containment area (SCA) area. Additionally, another contracted barge could arrive onsite within 48 hours if necessary.

Company personnel will follow the procedures listed in the barge manuals for internal movement of recovered product. Utilizing the cascading capabilities of the barge tanks, operators will consolidate petroleum product and oily water into separate tanks. If decanting from the barge is desired, an application must be submitted to the Unified Command for decanting consideration. Note that a longer settling time must be allowed for due to dynamic forces (wave action) exerted on a barge.

Section 1.6.9 Temporary Storage and Ultimate Disposal 18 AAC 75.449(a)(6)(K)

General Discussion

Two types of waste may be generated during a spill response, contaminated solid waste and liquid waste, which is usually a mixture of oil and water. All waste should be quantified and characterized. P49 has identified a waste management contractor, SEAPRO, to test, classify, and quantify waste. Each container will be labeled to indicate its contents and will be given an identification number for tracking. If approved by the ADEC, recovered liquid will be decanted to reduce the volume of recovered liquid. Any remaining contaminated water or off spec fuel will be shipped to an approved disposal facility.

Oily debris will be double bagged and placed in dumpsters or shipped to an approved storage site. Contents will be classified and recorded. If any oily liquids have been identified that require off-site disposal, they will be manifested and transported by permitted carrier to the designated disposal site. Should the need arise for disposal off site, the following facilities

have been identified for waste disposal. The approved disposal plan will designate the facility for disposal.

Company	Location	Phone
CBJ Household Hazardous Waste	Juneau	907-780-6691
Alaska Soil Recycling (petroleum-contaminated soils only)	Anchorage	907-349-3333
Stericycle Environmental Solutions	Anchorage	907-272-9007
Republic Services	Anchorage	907-258-1558

Temporary Storage

A temporary storage site will be used to stage oily waste. When site approval is received from the agencies, a temporary storage area can be constructed in approximately 24 hours. As waste is received at the temporary storage site, it will be tested and classified. See Section B-III-17 of the STAR Manual for a description of how to construct a temporary storage site. Final disposition of the waste will be described in the approved waste disposal plan. Permits required by state and local agencies will be obtained for temporary storage sites. Permits are discussed in Section 1.2.2 and contact information for obtaining permission for temporary storage sites is located in Section 1.2.

Section 1.6.10 Wildlife Protection

18 AAC 75.449(a)(6)(M)

The Terminal Manager is responsible for understanding wildlife response tasks and the qualifications necessary to perform the tasks. SEAPRO has contracted wildlife response capability. Their experts can assess the impact on wildlife, obtain permits necessary, and engage in wildlife hazing or rescue and rehabilitation. They have contracts with wildlife responders recognized in Alaska and authorized to implement primary, secondary, and tertiary response (SEAPRO Technical Manual Section 3 Part 10c).

A summary of response tasks concerning wildlife:

Level of Response	Activity
Primary	Keep oil from reaching wildlife or habitat. Prevention of secondary contamination through scavenging of dead and oiled wildlife.
Secondary	Haze wildlife away from contaminated habitat.
Tertiary	Capture and treat contaminated wildlife.

SEAPRO has contracts with the International Bird Rescue (IBR) and International Wildlife Research (IWR). IBR provides wildlife experts with the training necessary to rescue and rehabilitate birds and some small terrestrial furbearers, not including sea otters. IWR is approved for the response and treatment of all marine mammals including sea otters. The wildlife expert shall assess the spill in terms of potential impact on wildlife and obtain permits necessary to engage in wildlife hazing or rescue and rehabilitation.

Responders will report whether sea otters, or other marine mammals, are in the area of the spill and, if so, will observe the animals to determine if they are impacted. For handling species that are outside of SEAPRO's contracted ability, SEAPRO has an understanding with IBR that IBR will be responsible for contracting an NMFS approved wildlife responder.

A specialist from NOAA NMFS will provide oversight and permitting/authorizations for carcass collection, deterrence, and capture of marine mammals under their jurisdiction (NMFS 2017). A specialist from USFWS will provide oversight for any actions that are taken with regards to sea otters, migratory birds, and eagles. NOAA's Pinniped and Cetacean Oil Spill Response Guidelines and the Arctic Marine Mammal Disaster Response Guidelines provide guidance on dealing with marine mammals during a spill response (Ziccardi, et. al. 2015 and NMFS 2017).

Federal and state laws and regulations limit the activities of P49 personnel with respect to handling of all fish and wildlife. Under these laws and regulations, it is illegal for anyone to take or handle marine wildlife except personnel from the responsible government entities or individuals authorized to take or handle marine wildlife by the proper authorities. Carcass disposal will not occur without coordination with wildlife agencies.

For wildlife permit contacts, refer to Table 1.2-4 State and Federal Agency Notifications. Authorizations required for hazing, capture, carcass collection, or holding injured animals are tabulated in Table 1.2-7 State and Federal Permits for Wildlife Response Activities.

Plans for protection, recovery, disposal, rehabilitation, and release of wildlife affected by an oil spill are described in and will follow the guidance provided in the *Wildlife Protection Guidelines for Oil Spill Response in Alaska*. Wildlife Response Plans are addressed in Sections 3650 and 9740.3.8 of the *Wildlife Protection Guidelines for Oil Spill Response in Alaska* (see Section 3.11 of this plan for a link to the Area Plan References and Tools website). Contracted wildlife experts would be responsible for preparing Wildlife Response Plans and submitting them for agency approval.

Dead, oiled wildlife must be collected and disposed of to prevent secondary contamination of wildlife which will scavenge carrion. Collection of carcasses will follow the carcass collection tactics in Sections 1710.3, 2510, and 3640.2 of the *Wildlife Protection Guidelines for Oil Spill Response in Alaska*. Dead, oiled wildlife will be collected and labeled with chain of custody forms according to the *Wildlife Protection Guidelines for Oil Spill Response in Alaska* and shall be submitted to the appropriate wildlife resource agency (USFWS, NMFS, or ADF&G) or their representative. Disposition of carcasses will be done under their direction. A data sheet for collected dead oiled wildlife can be found in the *Wildlife Protection Guidelines Oil Spill Response in Alaska* (see Section 3.11 of this plan for a link to the Area Plan References and Tools website).

Section 1.6.11 Shoreline Cleanup Teams

18 AAC 75.449(a)(6)(N)

The techniques and equipment used for shoreline cleanup will be determined by the Shoreline Cleanup Assessment Technique (SCAT) team. The SCAT team is composed of the NOAA representative in Alaska, state, federal, and local government representatives.

Shoreline will be identified by type, sensitivity, and the degree of impact. This information will be obtained from the SCAT team through field inspections that will be conducted at the spill site. The SCAT team will recommend shoreline cleanup strategies and methods. The Unified Command will approve the method to be used in accordance with proper agency approval.

Shoreline cleanup must be coordinated with affected landowners. Permits may be required to enter and to operate on private land.

Only non-invasive manual cleanup techniques and bioremediation are proposed due to evidence indicating that invasive cleanup operations do more harm than good. Such things as the removal and erosion of beach gravel not only disturb resident life but can hinder recovery.

The primary shoreline cleanup methods P49 will use are manual collection. Sorbent boom and sorbent sweeps are good for low impact beach cleaning, and sorbent pads may be used to clean rocky shoreline. Water washing may be used with the sweeps if the Unified Command agrees to its use. The tools required for manual shoreline cleanup are available at the facility. They include:

- rakes,
- shovels (pointed and flat),
- sorbent booms,
- sorbent sweeps,
- survey stakes,
- barrier tapes,
- pitch forks, and
- plastic bags with wire ties.

A description of shoreline types in the region is provided in Table 3.9-3 Shoreline Type Predicted Oil Behavior.

Section 1.6.12 Spill Scenario

18 AAC 75.449(a)(6)(A) and (B)

The response strategy is the plan of action that is the framework P49 follows when responding to an oil spill. This determines the focus of the efforts which are then translated into action through the step-by-step tactics employed.

The strategy for responding to a spill is to stop it, to contain it, and to recover it. Since part of the purpose of containing the spilled product is to prevent it from damaging the environment, P49 has defined the following strategies to govern response to oil spills.

- Stop the source of the spill as soon as possible.
- Contain the spilled product.
- Protect threatened sensitive environments and wildlife.
- Recover product and clean up contaminated areas.

The situation may not always allow the response to step sequentially through these strategies. Although the Incident Commander will be guided by this strategy, logic and judgment will always be relied upon to determine when exceptions are necessary.

For example, usually the product spilled would be diesel fuel, but it is possible that responders face a gasoline spill. In this case, containment would not be correct. Dispersion or evacuation would be safer because of the possibility of explosion and fire.

In case of a diesel spill that was not quickly contained and was threatening wildlife or a sensitive environment, the priority of the response might shift to protecting the threatened environment or wildlife instead of containment.

The IC is expected to use judgment and to modify the plan to meet the circumstances.

The scenarios below are not written to be followed in a real spill response. They illustrate a hypothetical response to a spill by describing how response resources might be used to respond to an imaginary spill. They are not prescriptive. In the case of a real spill, the Unified Command would consult with the agencies having jurisdiction to decide what resources should be protected and what methods should be used.

Section 1.6.12.1 ADEC RPS (Worst-Case Discharge) Spill Scenario

18 AAC 75.449(a)(6)(A)

Scenario Summary:

Tank #22, the largest tank at the Juneau Terminal, ruptures on February 15 at 0730. The total storage capacity of the tank is 24,118 bbls/1,012,961 gallons of Diesel #2, and 288,695 gallons escapes the SCA due to a wave caused by the sudden rupture, approximately 725,891 gallons is retained within the tank. The spill amount is the response planning standard (RPS) volume of 6,873.7bbl/288,695 gallons. The oil flows to the NNE across relatively flat tertiary containment areas and continues downslope along the roadway, across the facility yard, and onward to Gastineau Channel. Approximately 3,426.8 bbls/144,347 gallons will permeate the porous substrate and pool in natural catchment areas prior to reaching the waterway. The remaining 3,446.9 bbls/144,770 gallons enters Gastineau Channel. The temperature is 40° F, wind is from the southeast at five to 10 knots. Tide currents are two knots towards the NNE, low tide was at 0531, so there is a flood tide occurring at this time. Sunrise and sunset are at 0730 and 1654, respectively, allowing for nine hours and 24 minutes of working daylight, increasing by approximately five minutes daily.

Scenario Assumptions

- The Safety Officer position is performed concurrently with other response duties of the Assistant Plant Manager (or his designee) in the first six hours of response. The Safety Officer does not count towards total personnel in a time period.
- Recovery operations start 30 minutes after sunrise and end 30 minutes before sunset unless specifically described differently in the scenario.
- All vehicles/vessels/aircraft requisitioned or chartered come with an experienced and qualified operator, who is not counted in the responder personnel calculations. The exception to this is the response skiffs owned by P49 and SEAPRO.
- SEAPRO responders arrive in waves to accommodate crew rotations and shift work. Once on site, they assume positions as needed and as directed by the Incident Management Team (IMT).
- The winds in Juneau are generally from the north from October to February and from the south from May through September. The following scenario is written for February, so the winds are assumed to be from the southeast.
- The full version of the STAR manual was used for reference to applicable spill response tactics throughout the scenario.
- The scenario described below is conjectural and depends on assumptions that may not always apply to a real spill. During an actual spill, a major spill response will be conducted under the direction of the Unified Command, who will respond to the real situation, following the principles set forth, and using the resources described in this plan.

ICS 201 Juneau Terminal RPS Scenario

1. Incident Name Juneau Terminal Scenario	2. Prepared By: P49 Date: 02/15 Time: 0730	INCIDENT BRIEFING ICS 201-CG
3. Map/Sketch		
4. Incident Timeline		
0730 Spill discovered		
0735 The Terminal Manager, who serves as the initial IC, notifies all facility personnel. Ignition sources, valves and pumps are disabled.		
0740 P49 Initial IC conducts internal QI notification; Initial IC notifies police and fire services to establish a security area and reroute traffic.		
0745 Initial IC conducts initial site assessment; request mobilization of SEAPRO's Juneau-based responders and equipment; Initial IC instructs office staff to make local notifications.		
0800 QI conducts agency notifications (NRC and ADEC) and notifications to local facilities and seafood processors; assemble onsite personnel; barge ordered.		
0815 P49 response equipment and personnel is mobilized; Initial IC conducts initial tactical/safety briefing.		
0830 With use of loaders contracted locally and P49 hand tools, containment berms are constructed in the tank yard to divert flow. 500 feet containment boom is deployed by use of P49's skiff from the pier to shoreline to prevent further spreading of product into the channel.		
0930 The Juneau-based SEAPRO equipment and personnel arrive on scene. SEAPRO's ORB and OSRV are used to assist in oil recovery. SEAPRO's LORI Brush 2-2.5 skimmer is deployed within the primary boom at the shoreline, discharging to the ORB.		
1000 Additional boom is deployed at the northeast shoreline to create a boom gate. Gastineau Contractors arrive to construct a lined trench for recovery of spilled product.		
1030 ADEC and USCG representatives arrive on scene to form the Unified Command (UC) with the P49 IC. A decontamination plan is established.		
5. Initial Response Objectives, Current Actions, Planned Actions Set by IOSC		
Ensure safety of responders and public Contain, control and recover spilled oil Complete all required notifications	Mobilized resources Protection of ESAs and economic areas	

ICS 201 Juneau Terminal RPS Scenario

1. Incident Name Juneau Terminal Scenario	2. Prepared by: P49 Date: 02/15 Time: 0730	INCIDENT BRIEFING ICS 201-CG
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6. Current Organization (fill in additional appropriate organization)

Unified Command

IC P49 Chief Operating Officer _____

SOSC ADEC _____

FOSC USCG Sector Juneau _____

— Safety Officer
 — Liaison Officer
 — Public Information Officer

P49 Safety Officer or OSRO Designee _____
 P49 LIO Officer _____
 P49 Chief Marketing Officer _____

Operations Section P49 General Manager	Planning Section P49 Operations Manager	Logistics Section P49 VP Supply/ Distribution	Finance Section P49 Chief Financial Officer
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Task Force 1 Shoreside Containment and Recovery Operations Task Force 2 Land Based Containment and Recovery Operations Task Force 3 Deflection and Exclusion Booming Operations	Task Force 4 Diversion Booming Operations Task Force 5 On-Water Free-Oil Recovery Operations Task Force 6 Aerial Surveillance Task Force 7 Shoreline Assessment	Task Force 8 Wildlife Response Task Force 9 Waste Management
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ICS 201 Juneau Terminal RPS Scenario

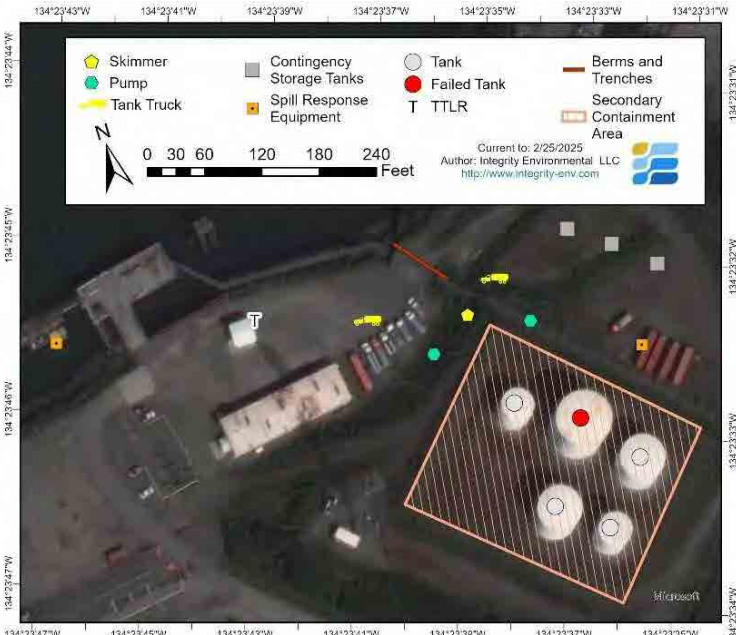
1. Incident Name Juneau Terminal Scenario		2. Prepared by: P49 Date: 02/15 Time: 0730		INCIDENT BRIEFING ICS 201-CG	
7. Resources Summary (using ICS 213rr)					
Resource	Resource Identifier	Time Ordered	ETA	On-Scene (X)	Notes (location/assignment/status)
Responders (4)	P49	0745	0745	X	TF-1, TF-4, TF-5, TF-9
Responders (2)	SEAPRO	0745	1145		TF-1
Containment boom (1,000')	P49	0745	0745	X	TF-1
Anchor buoy system (2)	P49	0745	0745	X	TF-1
Sorbent boom (360')	P49	0745	0745	X	TF-1
Sorbent boom (640') (JNU)	SEAPRO	0745	1145		TF-1
Skim-Pak 4200 (1)	P49	0745	0745	X	TF-1
Skim-Pak 4300 SH (1)	P49	0745	0745	X	TF-1
LORI Brush 2-2.5 Skimmer (1) (JNU)	SEAPRO	0745	1145		TF-1
Vikoma 12.5 bladder (1) (JNU)	SEAPRO	0745	1145		TF-1
OSRV (1) (JNU)	SEAPRO	0745	1145		TF-1, TF-5, TF-9
Oil Response Barge (ORB #9) (JNU)	SEAPRO	0745	1415		TF-1, TF-5
Landing craft (18')	P49	0745	0745	X	TF-1, TF-5
Work skiff (18')	P49	0745	0745	X	TF-1, TF-3, TF-5, TF-7, TF-8
Responders (4)	P49	0745	0745	X	TF-2
Responders (4)	SEAPRO	0745	1145		TF-2, TF-3
Sorbent rolls (430')	P49	0745	0745	X	TF-2
Sorbent pads (40 bales)	P49	0745	0745		TF-2
Centrifugal pump (1)	P49	0745	0745	X	TF-2
Yanmar Series L 2S5 (1)	P49	0745	0745	X	TF-2
Homelite Trash Pump M192 (1)	P49	0745	0745	X	TF-2
Tank trucks (2)	P49	0745	0745	X	TF-2, TF-9
550-gallon tanks (3)	P49	0745	0745	X	TF-2
1,000-gallon tanks (2)	P49	0745	0745	X	TF-2
Drums (50)	P49	0745	0745	X	TF-2
Pit liner	Contract	0745	1145		TF-2
Loader (2)	Contract	0745	1145		TF-2
Hand tools (multiple)	P49	0745	0745	X	TF-2
Responders (5)	SEAPRO	0745	1145		TF-3
Responders (1)	P49	0745	0745	X	TF-3
Containment Boom (1,100')	P49	0745	0745	X	TF-3

Anchor buoy system (4)	P49	0745	0745	X	TF-3
Work boat (1) (JNU)	SEAPRO	0745	1145		TF-3 & TF-4
Responders (7)	SEAPRO	0745	1145		TF-4
Containment Boom (1,000')	P49	0745	0745	X	TF-4
Anchor buoy system (2)	P49	0745	0745	X	TF-3
Truck (1)	P49	0745	0745	X	TF-3
Crucial 13/24 Disk Skimmer (1) (JNU)	SEAPRO	0745	1145		TF-4
Canflex Portable Tank (1) (JNU)	SEAPRO	0745	1145		TF-4
Tank truck and trailers (3 each)	P49	0745	0745	X	TF-4
Responders (8) (JNU)	SEAPRO	0745	1145		TF-5, TF-9
Containment boom (200') (JNU)	SEAPRO	0745	1145		TF-5
LORI Brush 2-2.5 (1) (JNU)	SEAPRO	0745	1145		TF-5
Vikoma 12K Skimmer (1) (JNU)	SEAPRO	0745	1145		TF-5
Can flex "Sea Slug" (1) (JNU)	SEAPRO	0745	1145		TF-5
Can flex "Sea Slug" (1) (KTN)	SEAPRO	0745	1545		TF-5
VOO (1) (JNU)	SEAPRO	0745	1145		TF-5
Responders (1)	SEAPRO	0745	1145		TF-6
Waterproof drone (1) (JNU)	SEAPRO	0745	1145		TF-6
Contracted helicopter and operator (1)	TEMSCO	0745	1145		TF-6
SCAT Team Responders (9)	SEAPRO	0745	1145		TF-7
Bird and Marine Mammal Responders (5)	SEAPRO Contract	0745	0745 on 02/16		TF-8
Wildlife hazing kit (1)	SEAPRO	0745	1145		TF-8
Responders (5)	P49	0745	0745	X	TF-9
Tank trucks (3)	P49	0745	0745	X	TF-9
Trailer pups (3)	P49	0745	0745	X	TF-9
Heavy Equipment (2)	Contract	0745	1145		TF-9
Liner (multiple)	Contract	0745	1145		TF-9
Building materials (multiple)	Contract	0745	1145		TF-9
Petro Mariner Barge (1)	P49	0745	0745 on 02/16		TF-8

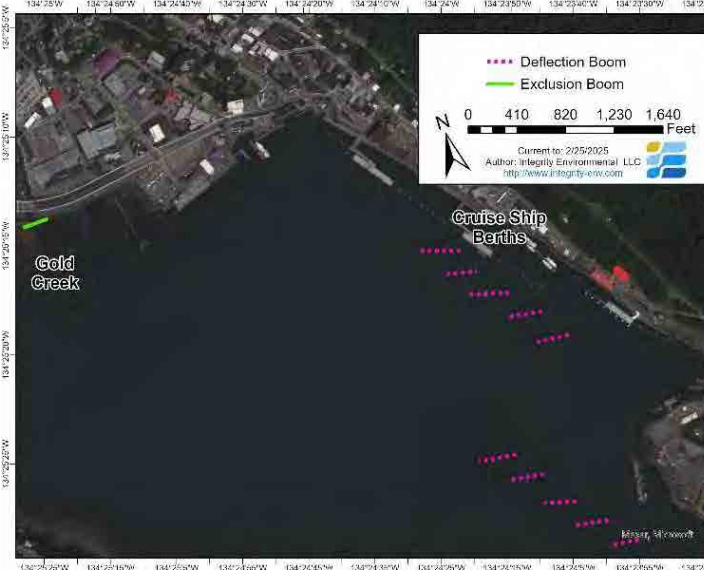
ICS 204 Task Force 1 Shoreside Containment and Recovery Operations

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 1			4. Shoreside Containment Operations		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Terminal Manager	P49	Ch 10/cell	
Operations Section Chief:		General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	6	P49 / SEAPRO	Dock		☒
Containment boom	1,000'	P49	Dock	Used for containment	☒
Anchor buoy system	2	P49	Dock	Used to secure containment boom	☒
Sorbent boom	360'	P49	Dock	Used to line containment boom	☒
Sorbent boom	640'	SEAPRO	Dock	Used to line containment boom	☒
Skim-Pak 4200	1	P49	Dock	Product recovery	☒
Skim-Pak 4300 SH	1	P49	Dock	Product recovery	☒
LORI Brush 2-2.5	1	SEAPRO	Dock	Product recovery	☒
Vikoma 12.5 bladder	1	SEAPRO	Dock	Storage of recovered liquids	☒
OSRV	1	SEAPRO	Dock	Storage of recovered liquids	☒
Oil Response Barge	1	SEAPRO	Dock	Storage of recovered liquids	☒
Landing Craft	1	P49	Dock	Used to deploy containment boom	☒
Work skiff	1	P49	Dock	Used to deploy containment boom	☒
7. Assignments					
Using the landing craft, deploy two loops pf 500' of containment boom around the shoreline at the release site. Line both strands with sorbent boom. Check and replace the sorbent boom as needed at least every six hours in the first operational period, and every 12 hours as necessary in subsequent periods. The sorbent boom is monitored and replaced as needed throughout the response. Shoreside recovery tactic begins inside the containment boom near the P49 dock using the Skim-Pak skimmers. LORI brush skimmer onboard the OSRV is deployed within containment boom. Recovered oil is pumped into the Oil Response Barge and Vikoma bladder. See STAR Manual Section B-II-2, Containment Boom, Section B-III-10 Shoreside Recovery, and Section B-III-11 Passive Recovery.					
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function		Radio: Freq/System/Channel		Phone	
P49 Responders (4)		Channel 10		N/A	
SEAPRO Responders (2)		Channel 10		N/A	
Total Responders:				6	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

ICS 204 Task Force 2 Land Based Containment and Recovery Operations

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 2			4. Land Based Containment and Recovery Operations		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	8	P49/ SEAPRO	Yard		☒
Sorbent rolls	430'	P49	Yard		☒
Sorbent pads	40 bales	P49	Yard	Passive recovery	☒
Centrifugal pump	1	P49	Yard	Product recovery	☒
Yanmar Series L 2S5	1	P49	Yard	Product recovery	☒
Homelite Trash Pump	1	P49	Yard	Product recovery	☒
Tank trucks	2	P49	Yard	Storage of recovered liquids	☒
Contingency tanks	5	P49	Yard	Storage of recovered liquids	☒
Drums	50	P49	Yard	Storage of recovered liquids	☒
Pit liner and hand tools	Various	P49	Yard	To line berms/dams/trenches	☒
Loader + operator	2	Contract	Yard	Construct berms/trenches	☒
7. Assignments: Berms/dams/trenches constructed by Gastineau Contractors by contract where the road enters the yard as well as around the perimeter of the spill area to divert oil and to help contain the flow. The berms are lined with impermeable material, sorbents deployed to block the flow. The sorbents are monitored and replaced as needed throughout the response. Deploy pumps and Yanmar skimmer to recover fuel on land. Recovered product is discharged to tank trucks and temporary tanks and drums. On land recovery tactics will remain active until storage capacity is met; resuming when the barge arrives. See STAR Manual Section B-III-7, On Land Recovery, and Section B-III-17, Land-based Storage & Transfer of Oily Liquids.					
					
8. Special Instructions for Division/Group All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
P49 Responders (4)		Channel 10		N/A	
SEAPRO Responders (4)		Channel 10		N/A	
Total Responders:				8	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST			ICS 204-OS		

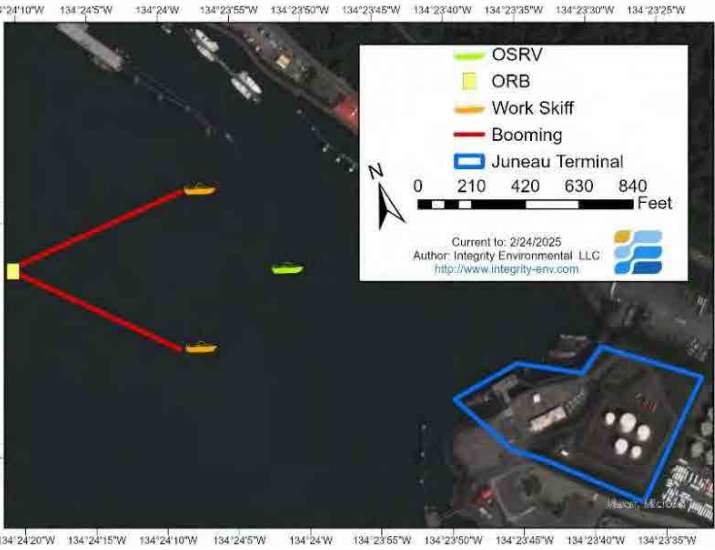
ICS 204 Task Force 3 Deflection and Exclusion Booming Operations

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 3		4. Deflection and Exclusion Booming Operations			
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	6	P49/ SEAPRO	Dock		☒
Containment Boom	1,100'	P49	Dock	Deflection and exclusion booming	☒
Anchor Bouy system	4	P49	Dock	Used to secure boom	☒
Work skiff	1	P49	Dock	Boom deployment	☒
Work boat (21')	1	SEAPRO	Dock	Boom deployment	☒
7. Assignments: Deploy five 100' angled strands of boom on the north side of the channel to deflect fuel away from the Cruise Ship Berths. Deploy five 100' angled strands of boom west of the spill area to deflect fuel towards the facility to deflect any oil returning with the tide towards the Facility dock area where it can more easily be contained and recovered and prevent oil from continuing down the Channel. Deploy 100' exclusion boom at the entrance of Gold Creek, an anadromous stream. Boom that is on tidally influenced waters will require maintenance through tide changes. The following actions should be taken to ensure the boom is effective: • Readjust at least every 6 hours to maintain boom shape through tide cycles with the P49 response skiff. • Continuous monitoring of system is required. • Deployment planning is based on average high tidal conditions. See STAR Manual Section B-III-12-1, Exclusion Boom and Section B-III-13, Deflection Boom.					
					
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function		Radio: Freq/System/Channel		Phone	
P49 Responders (1)		Channel 10		N/A	
SEAPRO Responders (5)		Channel 10		N/A	
		Total Responders:		6	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST			ICS 204-OS		

ICS 204 Task Force 4 Diversion Booming Operations

1. Incident Name Juneau Terminal Scenario	2. Operational Period (Date/Time) From: 02/15 0730 To: End	Assignment List ICS 204-OS			
3. Task Force 4	4. Diversion Booming Operations				
5. Operations Personnel	Name	Affiliation	Contact # (s)		
Initial Incident Commander:	Terminal Manager	P49	Ch 10/cell		
Operations Section Chief:	P49 General Manager	P49	Ch 10/cell		
6. Resources Assigned This Period		"X" indicates special instructions			
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	3	P49	Dock		☒
Responders	7	SEAPRO	Dock		☒
Containment boom	1,000'	P49	Subport Dock	Diversion boom	☒
Anchor Bouy system	2	P49	Dock	Used to secure boom	☒
Truck	1	P49	Yard	Transport containment boom	☒
Crucial 13/24 Disk Skimmer	1	SEAPRO	Subport Dock	Product recovery	☒
Canflex Portable Tank	1	SEAPRO	Subport Dock	Storage of recovered liquids	☒
Work boat (21')	1	SEAPRO	Dock	Boom deployment	☒
Tank truck and trailers	3 each	P49	Shoreside	Storage of recovered liquids	☒
7. Assignments					
1,000' of boom is loaded on a truck and delivered to the western end of the Subport Dock. Two sections of 500 feet boom are deployed from land with assistance from responders on a workboat and anchored into the middle of the channel. Oil is diverted to the pocket that is created near the shoreline where the Crucial disc skimmer is deployed. A Canflex portable tank and P49 tank trucks are used to store recovered product. See STAR Manual Section B-III-10 Shoreside Recovery and Section B-III-8, Diversion Boom.					
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>	<u>Radio: Freq/System/Channel</u>	<u>Phone</u>			
P49 Responders (3)	Channel 10	N/A			
SEAPRO Responders (7)	Channel 10	N/A			
Total Responders:		10			
10. Prepared By (Resource Unit Leader) Planning Section		11. Approved By (Planning Section Chief) Date/Time			
ASSIGNMENT LIST		ICS 204-OS			

ICS 204 Task Force 5 On-Water Free-Oil Recovery Operations

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 5		4. On-Water Free-Oil Recovery Operations			
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	12	P49/SEAPRO	Dock		☒
Containment boom	200'	SEAPRO	Dock	Used for on-water skimming	☒
Landing craft (18')	1	P49	Dock	On-water recovery	☒
Work skiff (18')	1	P49	Dock	On-water recovery	☒
LORI Brush 3-3.5	1	SEAPRO	Dock	Product recovery	☒
Vikoma 12K Skimmer	1	SEAPRO	Dock	Product recovery	☒
Can flex "Sea Slug"	2	SEAPRO	Dock	Storage of recovered liquids	☒
OSRV	1	SEAPRO	Dock	On water recovery	☒
ORB	1	SEAPRO	Dock	On-water recovery and temp. storage	☒
VOO	1	SEPRO	Dock	Shuttling temp. storage to land	☒
7. Assignments		 On-water recovery operations are deployed with use of the P49 work skiffs. Deploy 200' of containment boom and use the OSRV with one Lori skimmer to begin oil recovery until the sun sets. The Canflex "Sea Slug" bladders will be used as contingency storage for the Lori skimmer. The VOO will be used to shuttle full bladders to the shoreline so there is little interruption in recovery. Review spill trajectories and obtain on-scene reports of oil movement from field responders. Target leading edge of spill in the Channel to contain oil and prevent impacts to sensitive areas. On outgoing (low) tide, contain and recover oil near dock areas to prevent spread of oil. Anticipate tidal changes and shift assets to maximize oil recovery efforts. See STAR Manual Section B-III-6, On-Water Free Oil Recovery.			
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio:</u>		<u>Phone</u>	
P49 Responders (4)		Channel 10		N/A	
SEAPRO Responders (8)		Channel 10		N/A	
		Total Responders:		12	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST					ICS 204-OS

ICS 204 Task Force 6 Aerial Surveillance

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 6			4. Aerial Surveillance		
5. Operations Personnel		Name		Affiliation	Contact # (s)
Initial Incident Commander:		Facility Manager		P49	Ch 10/cell
Operations Section Chief:		P49 General Manager		P49	Ch 10/cell
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	1	SEAPRO	Yard	On-water spill tracking. Responder is FAA certified to operate drone.	☒
Waterproof drone	1	SEAPRO	Yard	On-water spill tracking, once available.	☒
Contracted helicopter and operator	1	TEMSCO	Juneau Airport	Initial overflights and/or if adverse weather conditions prevent operations of the drone.	☒
7. Assignments: Spill trajectory at hour 2, 4 and 8 without recovery operations.					
8. Special Instructions for Division/Group Air operations – Requires mustang suit. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Read tides and currents when provided. Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
SEAPRO Responder (1)		Channel 22		N/A	
Contract Helicopter Operator (1)		Channel 22		N/A	
Agency Personnel (2)		Channel 10		N/A	
Total Responders:				4	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

ICS 204 Task Force 7 Shoreline Assessment

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 7			4. Shoreline Assessment		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
SCAT Team Responders	9	SEAPRO	Yard	Shoreline and upland assessment	☒
Work Skiff	1	P49	Dock	For transporting personnel and equipment	☒
7. Assignments: Implement the SCAT Plan as prepared by the Environmental Unit. Based on spill trajectory, overflights, and migrations of product on land determine accessibility by vehicle and/or skiff. Once on-water recovery efforts are completed and based on tide/currents implement assessment plan approved by the Unified Command.					
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
SEAPRO Responders (9)		Channel 10		N/A	
Resource Agency Personnel (2)		Channel 10		N/A	
		Total Responders:		11	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

ICS 204 Task Force 8 Wildlife Response

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 8			4. Wildlife Assessment		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty	Ownership	Staging Area	Notes/Remarks	
Bird and Marine Mammal Responders	5	SEAPRO Contract	Fuel Float	Includes 2 IBR personnel (who are certified to haze) and 3 IWR (who are qualified to respond to otters) under contract to SEAPRO	☒
Wildlife hazing kit	1	SEAPRO	Dock		☒
Work Skiff	1	P49	Dock	For transporting responders and equipment	☒
7. Assignments: Conduct wildlife reconnaissance and implement the approved Wildlife Response Plan. Based on spill surveillance, determine accessibility and protection needs. Reports wildlife observation to Environmental Unit for situation status updates. Order additional wildlife resource equipment through Logistics based on observations. Immediately report sighting of oiled wildlife to the IC. IBR and IWR personnel are anticipated to arrive 24 hours after being requested. Reference: Wildlife Protection Guidelines for Oil Spill Response in Alaska (version 2020.2) https://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/tools/					
8. Special Instructions for Division/Group Water Operations – Requires PFD. All Operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Read tides and currents when provided. Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
Agency Personnel (2)		Channel 10		N/A	
IBR Personnel (2)		Channel 10		N/A	
IWR Personnel (3)		Channel 10		N/A	
		Total Responders:		7	
10. Prepared By (Resource Unit Leader) Planning Section/Environmental Unit			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

ICS 204 Task Force 9 Waste Management

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 9			4. Waste Management		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty	Ownership	Staging Area	Notes/Remarks	
Responders	5	P49		Operate tank trucks	☒
Responders	8	SEAPRO		Monitor and record transfer operations from storage devices	☒
Heavy Equipment	2	Contract	Yard	Used to construct waste storage area	☒
Liner	Mult	Contract	Yard	Used to line waste storage area	☒
Building materials	Mult	Contract	Yard	Used to construct waste storage area	☒
Tank Trucks	5	P49	Yard	Transfer of recovered liquids	☒
Trailer pups	3	P49	Yard	Transfer of recovered liquids	☒
OSRV	1	SEAPRO	Dock	Transfer full bladders to barge	☒
Petro Mariner Barge	1	P49	Dock	Storage of recovered liquids	☒
7. Assignments: Transfer and storage of recovered product from near shore and on-water operations. Recovered product is transferred from bladders and temporary storage containers to the Petro Mariner Barge (or similar contracted barge) to be transported off site. As directed by the Waste Management Plan, a member of the response personnel contacts Channel Construction (local) to start to build a lined containment area in the northwest corner of the yard. Channel Construction has materials available to construct a lined area measuring approximately 90 feet by 90 feet with four foot high walls, creating a lined 32,400 cubic foot area to temporarily hold contaminated sediment from the affected yard. P49 IMT prepares a permit application for separation and decanting of free water into boomed containment and recovery areas to reduce the storage capacity required. Application is submitted to UC and approved. The tank trucks will be used to transfer recovered oil from the Oil Response Barge (ORB). While transferring from the ORB, tank trucks will also pump the oily water to the OWS (18,000 gallons capacity). Facility tank trucks will pull oily water from the bottom of the OWS and transport for treatment/disposal at Vigor Shipyards. Maintain documentation that accounts for quantity of product transferred from each device throughout the response.					
8. Special Instructions for Division/Group Water Operations – Requires PFD. All Operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Read tides and currents when provided. Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
P49 Responders (5)		Channel 10		N/A	
SEAPRO Responders (8)		Channel 10		N/A	
		Total Responders:		13	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST					ICS 201-OS

ICS 215 Juneau Terminal RPS Scenario

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		OPERATIONAL PLANNING WORKSHEET ICS 215-OS													
3. Division/Group or Location	4. Work Assignments	5. Resource/Equipment										9. "X" here if 204A is Needed					
		Resource	Containment Boom	Skimmer	Vessels	Tank Trucks & Trailers	Temporary Storage	Personnel	Aircraft	Pumps & Hose	Sorbent Boom	6. Notes/Remarks	7. Reporting Location	8. Req. Arrival Time			
Task Force 1	Shoreside Containment and Recovery Operations	Req.	1,000'	3	2	0	2	6	0	0	1,000'	^P49 skiff reassigned from TF-1 to TF-3, 5, 7, & 8; landing craft reassigned from TF-1 to TF-; 5; OSRV reassigned to TF-5 & 9. ^SEAPRO work boat reassigned from TF-3 to TF-4. *P49 personnel reassigned from TF-1 to TF-4, 5 & 9; SEAPRO personnel reassigned from TF-2 to TF-4, and from TF-5 to TF-9. *P49 tank trucks reassigned from TF-2 to TF-9 **SEAPRO ORB reassigned from TF-1 to TF-5			☒		
		Have	1,000'	3	2	0	2	6	0	0	1,000'						
		Need	0	3	0	0	0	0	0	0	0						
Task Force 2	Land Based Containment and Recovery Operations	Req.	0	1	0	2	55	8	0	2	430'					☒	
		Have	0	1	0	2	55	8	0	2	430'						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 3	Deflection and Exclusion Booming Operations	Req.	1,100'	0	2	0	0	6	0	0	0						☒
		Have	1,100'	0	2	0	0	6	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 4	Diversion Booming Operations	Req.	1,000'	1	1	3	1	10	0	0	0	☒					
		Have	1,000'	1	1	3	1	10	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 5	On-Water Free-Oil Recovery Operations	Req.	200'	2	3	0	2	12	0	0	0		☒				
		Have	200'	2	3	0	2	12	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 6	Aerial Surveillance	Req.	0	0	0	0	0	1	2	0	0			☒			
		Have	0	0	0	0	0	1	2	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 7	Shoreline Assessment	Req.	0	0	1	0	0	9	0	0	0	☒					
		Have	0	0	1	0	0	9	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 8	Wildlife Response	Req.	0	0	1	0	0	5	0	0	0		☒				
		Have	0	0	1	0	0	5	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
Task Force 9	Waste Management	Req.	0	0	1	8	1	13	0	0	0						
		Have	0	0	1	8	1	13	0	0	0						
		Need	0	0	0	0	0	0	0	0	0						
10. Total Resources Required		3,300'	7	5^	11*	60**	40±	2	2	1,430'	13. Prepared by:						
11. Total Resources On Hand		3,300'	7	5^	11*	60**	40±	2	2	1,430'							
12. Total Resources Needed		0	0	0	0	0	0	0	0	0							
OPERATIONAL PLANNING WORKSHEET											ICS 215-OS						

ICS 232 Juneau Terminal RPS Scenario Resources at Risk

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Resources at Risk Summary ICS 232-OS	
3. Environmentally Sensitive Areas and Wildlife Issues					
Site #	Priority	Site Name and/or Physical Location		Site Issues	
1	1	DIPAC Hatchery		The hatchery is located at Sheep Creek and Salmon Creek and supports	
2	2	Mendenhall Wetlands (MESA61)		Wetland estuary that supports aquatic and bird life, anadromous fish, herring, shellfish, bottom fish, and sea mammals. Also provides habitat for black bear, river otter, mink, Sitka black-tailed deer, and bald eagles.	
3	3	Anadromous waters within 5 miles of the Douglas Island Terminal		The majority of streams nearby support salmon. There are 18 anadromous streams identified in Table 3.9-2 and Figure 3.9-3 of this plan.	
Narrative: At the discretion of the IC, the Operations Section Chief, and OSRO additional response tactics may be required to prevent the release from reaching nearby ESAs. Response tactics include dikes, berms, and trenches, containment boom, exclusion boom and passive recovery with sorbent materials, including snow. See STAR Manual, Sections B-III-2-1, B-III-3-1, B-III-11-1, and B-III-12-1. Immediately report sightings of oiled wildlife to the IC. See Sections 1.6 and 3.9 of this plan for more information recovery strategies, containment and control strategies, wildlife protection, and archeo-cultural and socio-economic factors in the region.					
4. Archeo-cultural and socio-economic issues					
Site #	Priority	Site Name and/or Physical Location		Site Issues	
1	1	Nearby hatchery (DIPAC)		Notify business if a spill occurs. Protection prioritization to be conducted by IC and Operations Section Chief. See Section 1.2 for contact information. Deflection booming will be used to protect threatened operating facilities.	
2	2	Boat Harbor		Harbor master will be notified if contact is suspected to occur, harbor traffic halted, and entrance will be boomed off. See Section 1.2 for contact information	
3	3	Cruise Ship Berths		Cruise ship berth will be notified if contact is suspected to occur. Deflection booming will be used to protect the cruise ship berth.	
Narrative: Response tactics to prevent a release from impacting a neighboring business include dikes, berms, and trenches, containment boom, and passive recovery with sorbent materials, including snow. See STAR Manual, Sections B-III-2-1, B-III-3-1, and B-III-11-1. All responders are instructed to report any cultural resources found during operations to the Federal On Scene Coordinator (FOSC) Historic Properties Specialist (see Section 3.9 of this plan for more information).					
Prepared by: Environmental Unit Leader				Date/Time:	
RESOURCES AT RISK SUMMARY				ICS 232-OS	

ICS 209 Incident Status Summary First Operational Period

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 at 0730 To: 02/16 at 0730		Time of Report 24 hours	INCIDENT STATUS SUMMARY ICS 209-OS	
3. Spill Status (Estimated, in Barrels) [Ops & EUL/SSC] Source Status: Remaining Potential (bbl.): <u>0</u> ☐ Secured Rate of Spillage (bph): <u>N/A</u> ☐ Unsecured				8. Equipment Resources [RUL] See ICS 201 - Resources Summary		
Since Last Report Volume Spilled (bbl) 6,873.7 Volume Spilled (gal) 288,695.5		Total 6,873.7 288,695.4				
Mass Balance/Oil Budget						
	Gal	BBL				
Recovered Oil Current	19,937.8	474.7				
Evaporation	NA	NA				
Chemical Dispersion	NA	NA				
Burned	NA	NA				
Floating, Contained near Dock	268,757.7	6,399				
Floating, Uncontained	0	0				
Total spilled oil accounted for:	288,695.5	6,873.7				
4. Waste Management (Estimated) [Ops/Disposal] At the end of this Operational Period 02/16 at 0730						
	Project Recovered	Stored	Disposed			
Oily Liquids (gallons)	16,884	16,884	0			
Liquids (gallons)	32,600.4	32,600.4	0			
5. Shoreline Impacts (Estimated, in miles) [PSC/EUL/SSC]						
Degree of Oiling	Affected	Cleaned	To Be Cleaned			
Light	0	0	0			
Medium	0	0	0			
Heavy	0	0	0			
Total	0	0	0			
6. Wildlife Impacts [Ops/Wildlife Br.]						
Numbers in () indicate subtotal that are threatened/endangered species.					Died in Facility	
Mammals	0	0	0	0	0	0
Marine Mammals	0	0	0	0	0	0
Fish	0	0	0	0	0	0
Total	0	0	0	0	0	0
7. Safety Status [Safety Officer]						
	Since Last Report	Total				
Responder Injury	0	0				
Public Injury	0	0				
9. Personnel Resources [RUL]						
Description	People in Cmd. Post	People in the Field	Total People On Scene			
Federal	1	0	1			
State	1	2	3			
Local	0	2	2			
RP	1	12	13			
Contract Personnel	0	26	26			
Volunteers	0	0	0			
Total Response Personnel from all Organizations:			45			
10. Special Notes						
11. Prepared by: (Situation Unit Leader)						
INCIDENT STATUS SUMMARY						ICS 209-OS

ICS 209 Incident Status Summary Second Operational Period

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/16 at 0730 To: 02/17 at 0730		Time of Report 48 hours	INCIDENT STATUS SUMMARY ICS 209-OS																																																					
3. Spill Status (Estimated, in Barrels) [Ops & EUL/SSC] Source Status: Remaining Potential (bbl.): 0 ☐ Secured Rate of Spillage (bph): N/A ☐ Unsecured Since Last Report Total Volume Spilled (bbl) 0 6,873.7 Volume Spilled (gal) 0 288,695.4				8. Equipment Resources [RUL] See ICS 201 - Resources Summary																																																						
Mass Balance/Oil Budget <table border="1"> <thead> <tr> <th></th> <th>Gal</th> <th>BBL</th> </tr> </thead> <tbody> <tr> <td>Recovered Oil Current</td> <td>253,633.8</td> <td>6,038.9</td> </tr> <tr> <td>Evaporation</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Chemical Dispersion</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Burned</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Floating, Contained near Dock</td> <td>35,061.6</td> <td>834.8</td> </tr> <tr> <td>Floating, Uncontained</td> <td>0</td> <td>0</td> </tr> <tr> <td>Total spilled oil accounted for:</td> <td>288,695.4</td> <td>6,873.7</td> </tr> </tbody> </table>					Gal	BBL	Recovered Oil Current	253,633.8	6,038.9	Evaporation	NA	NA	Chemical Dispersion	NA	NA	Burned	NA	NA	Floating, Contained near Dock	35,061.6	834.8	Floating, Uncontained	0	0	Total spilled oil accounted for:	288,695.4	6,873.7																															
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ICS 209 Incident Status Summary Third Operational Period

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/17 at 0730 To: 02/18 at 0730		Time of Report 72 hours	INCIDENT STATUS SUMMARY ICS 209-OS																																																					
3. Spill Status (Estimated, in Barrels) [Ops & EUL/SSC] Source Status: Remaining Potential (bbl.): 0 ☐ Secured Rate of Spillage (bph): N/A ☐ Unsecured Since Last Report Total Volume Spilled (bbl) 0 6,873.7 Volume Spilled (gal) 0 288,695.4				8. Equipment Resources [RUL] See ICS 201 - Resources Summary																																																						
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Section 1.6.12.1.1 Scenario Recovery Efficiency

18 AAC 75.451(h)(2) and (3)

Table 1.6-1 Oil Recovery Efficiency

Skimmer/Pump	EDRC ¹ (bbl/day)	EDRC (bbl/hr)	EDRC (gal/hr)
SkimPak 4200	117	4.9	204.75
SkimPak 4300 SH	648	27	1,134
Vikoma-Komara 12K	542	22.5	948.5
Centrifugal Pump	377	15.7	659.75
Yanmar Series L 2S5	6,342	264.25	11,098.5
Homelite Trash Pump	6,582	274.25	11,518.5
LORI 3-3.5 Brush Skimmer	3,715	154.8	6,501.3
LORI 2-2.5 Brush Skimmer	2,477	103.2	4,334.8
Crucial 13/24 Disc Skimmer	581	24.2	1,016.75

¹ Effective Daily Recovery Capacity (EDRC): Manufacturer's rate in BPH times 24 hours times 20% = EDRC. The EDRC or Oil Recovery Efficiency Factor, is the ratio, expressed as a percentage, of the volume of oil recovered to the volume of total liquids recovered; it does not count down time of the equipment when it is being set up, or when recovery is halted to empty out temporary storage.

Table 1.6-2 calculates the effective daily oil recovery capacity for each skimming system in accordance with 18 AAC 75.451(h)(3) using the following equation.

$$R = T \times U \times E$$

R = Effective daily oil capacity in barrels;

T = Manufacturer's rated throughput capacity as defined in (o) of this section, in barrels per hour;

U = Hours that an operator can document capability to operate equipment during a 24-hour period under spill conditions; this figure may not exceed 20 hours per day unless an operator can demonstrate that the recovery rate can be sustained for longer periods;

E = Oil recovery efficiency rate; 0.2 unless otherwise approved by the department;

Table 1.6-2 Recovery Capacity Per Operational Period

Skimmer	Manufacturer's Rated Capacity (bbl/hr)	Oil Recovery Efficiency Rate	Hours Operating	Effective daily oil capacity (barrels)
	<i>T</i>	<i>E</i>	<i>U</i>	<i>R</i>
SkimPak 4200	24.4	0.2	4	19.52
SkimPak 4300	135	0.2	3	81
Centrifugal Pump	78.5	0.2	7	109.9
Yanmar Pump	1321.3	0.2	1	264.26
Total Op Period 1				474.68
SkimPak 4200	24.4	0.2	10	48.8
SkimPak 4300	135.0	0.2	10	270.0
Vikoma-Komara 12K	112.9	0.2	9	203.2

Table 1.6-2 Recovery Capacity Per Operational Period

Skimmer	Manufacturer's Rated Capacity (bbl/hr)	Oil Recovery Efficiency Rate	Hours Operating	Effective daily oil capacity (barrels)
	<i>T</i>	<i>E</i>	<i>U</i>	<i>R</i>
LORI 2-2.5 Brush Skimmer	516.0	0.2	7	722.4
LORI 3-3.5 Brush Skimmer	774.0	0.2	7	1083.6
Crucial 13/24 Disc Skimmer	121.0	0.2	7	169.4
Centrifugal Pump	78.5	0.2	7	109.9
Yanmar Pump	1321.3	0.2	6	1589.16
Homelite Trash Pump	1371.4	0.2	5	1371.4
Total Op Period 2				5,564.38
SkimPak 4200	24.4	0.2	2	14.63
SkimPak 4300	135.0	0.2	2	81.00
Vikoma-Komara 12K	112.9	0.2	3	67.75
LORI 2-2.5 Brush Skimmer	516.0	0.2	3	309.63
LORI 3-3.5 Brush Skimmer	774.0	0.2	2	309.58
Crucial 13/24 Disc Skimmer	121.0	0.2	2	72.63
Total Op Period 3				855.21
TOTAL RECOVERY				289,561 gal / 6,894.3 bbl

Tables 1.6-3 and 1.6-4 demonstrate that there is sufficient contingency storage available to accommodate the each of the recovery devices and the recovery rates.

Table 1.6-3 Water-Based Recovery Table

		EDRC in barrels (bbl/day)							(bbl/hr)									
		Skim-Pak 4200	Skim-Pak 4300 SH	Vikoma Komara 12K Skimmer	LORI 2- 2.5 Brush Skimmer	LORI 3- 5.5 Brush Skimmer	Crucial 13/24 Disc Skimmer	Total EDRC	Fuel Recovered	Total Fuel Recovered	Total Oily Water Recovered	Total Liquid Recovered	TSC	Empty TSC	Offsite storage	TSC delivered	Available Storage	Capacity
7:30	0							0	0.0	0.0	0	0	0	0				
8:30	1							0	0.0	0.0	0	0	0	0				
9:30	2							0	0.0	0.0	0	0	335.7	336		335.7	P49 Tank Trucks (3)	335.7
10:30	3	117	648					765	31.9	31.9	128	159	594.9	436		259.2	Canflex Sea Slug FCB-43E	102
11:30	4	117	648					765	31.9	63.8	255	319	594.9	276			Vikoma Floating Storage	78.6
12:30	5	117	648					765	31.9	95.6	383	478	594.9	117			Vikoma Floating Storage	78.6
13:30	6	117						117	4.9	100.5	402	503	594.9	92			Canflex Sea Slug FCB-60	157
14:30	7							0	0.0	100.5	402	503	594.9	92		385	Canflex Sea Slug FCB-43E	102
15:30	8							0	0.0	100.5	402	503	594.9	92			Canflex Sea Slug FCB-25 x 2	126
16:30	9							0	0.0	100.5	402	503	2102	1599		1507	Response Barge	249
17:30	10							0	0.0	100.5	402	503	2102	1599			Unitor 100 m3 Bladder x 2	1258
18:30	11							0	0.0	100.5	402	503	2102	1599				
19:30	12							0	0.0	100.5	402	503	2102	1599				
20:30	13							0	0.0	100.5	402	503	2102	1599				
21:30	14							0	0.0	100.5	402	503	2102	1599				
22:30	15							0	0.0	100.5	402	503	2102	1599				
23:30	16							0	0.0	100.5	402	503	2102	1599				
0:30	17							0	0.0	100.5	402	503	2102	1599				
1:30	18							0	0.0	100.5	402	503	2102	1599				
2:30	19							0	0.0	100.5	402	503	2102	1599				
3:30	20							0	0.0	100.5	402	503	2102	1599				
4:30	21							0	0.0	100.5	402	503	2102	1599				
5:30	22							0	0.0	100.5	402	503	2102	1599				
6:30	23							0	0.0	100.5	402	503	2102	1599				

Daylight Hours
Darkness Hours
First Operational Period
Second Operational Period
Third Operational Period

Table 1.6-3 Water-Based Recovery Table, Continued

		EDRC in barrels (bbl/day)							(bbl/hr)									
Time	HR	Skim-Pak 4200	Skim-Pak 4300 SH	Vikoma Komara 12K Skimmer	LORI 2-2.5 Brush Skimmer	LORI 3-3.5 Brush Skimmer	Crucial 13/24 Disc Skimmer	Total EDRC	Fuel Recovered	Total Fuel Recovered	Total Oily Water Recovered	Total Liquid Recovered	TSC	Empty TSC	Offsite storage	TSC delivered	Available Storage	Capacity
7:30	24	117	648					765	31.9	132.4	530	662	2102	1440				
8:30	25	117	648	542				1307	54.5	186.8	747	934	2102	1168				
9:30	26	117	648	542				1307	54.5	241.3	965	1206	2102	895				
10:30	27	117	648	542	2477	3715	581	8080	336.7	578.0	2312	2890	30673	27783		28571	1 x Petro Mariner barge	28571
11:30	28	117	648	542	2477	3715	581	8080	336.7	914.6	3659	4573	30673	26100				
12:30	29	117	648	542	2477	3715	581	8080	336.7	1251.3	5005	6256	30673	24416				
13:30	30	117	648	542	2477	3715	581	8080	336.7	1588.0	6352	7940	30673	22733				
14:30	31	117	648	542	2477	3715	581	8080	336.7	1924.6	7699	9623	30673	21050				
15:30	32	117	648	542	2477	3715	581	8080	336.7	2261.3	9045	11306	30673	19366				
16:30	33	117	648	542	2477	3715	581	8080	336.7	2598.0	10392	12990	30673	17683				
17:30	34							0	0.0	2598.0	10392	12990	30673	17683				
18:30	35							0	0.0	2598.0	10392	12990	30673	17683				
19:30	36							0	0.0	2598.0	10392	12990	30673	17683				
20:30	37							0	0.0	2598.0	10392	12990	30673	17683				
21:30	38							0	0.0	2598.0	10392	12990	30673	17683				
22:30	39							0	0.0	2598.0	10392	12990	30673	17683				
23:30	40							0	0.0	2598.0	10392	12990	30673	17683				
0:30	41							0	0.0	2598.0	10392	12990	30673	17683				
1:30	42							0	0.0	2598.0	10392	12990	30673	17683				
2:30	43							0	0.0	2598.0	10392	12990	30673	17683				
3:30	44							0	0.0	2598.0	10392	12990	30673	17683				
4:30	45							0	0.0	2598.0	10392	12990	30673	17683				
5:30	46							0	0.0	2598.0	10392	12990	30673	17683				
6:30	47							0	0.0	2598.0	10392	12990	30673	17683				
7:30	48	117	648	542	2477	3715	581	8080	336.7	2934.6	11739	14673	30673	16000				
8:30	49	117	648	542	2477	3715	581	8080	336.7	3271.3	13085	16356	30673	14316				
9:30	35	117	648	542	2477		581	4365	181.9	3453.2	13813	17266	30673	13407				

Daylight Hours
Darkness Hours
First Operational Period
Second Operational Period
Third Operational Period

Table 1.6-4 Land-Based Recovery Table

Time	HR	EDRC in barrels (bbl/day)				(bbl/hr)				Offsite storage	TSC delivered	Available Storage	Capacity
		Centrifugal Pump	Yanmar Series L 2S5	Homelite Trash Pump M192	Total EDRC	Fuel Recovered	Total Fuel Recovered	TSC	Empty TSC				
7:30	0				0	0.0	0.0	0	0				
8:30	1				0	0.0	0.0	376	376		376	Petro 49 Tank Trucks (2)	223.8
9:30	2	377	6342		6719	280.0	280.0	376	96			550-gallon tanks (3)	39.2
10:30	3	377			377	15.7	295.7	376	80			1,000-gallon tanks (2)	47.6
11:30	4	377			377	15.7	311.4	376	65			Close top drums (50)	65.4
12:30	5	377			377	15.7	327.1	376	49				
13:30	6	377			377	15.7	342.8	376	33				
14:30	7	377			377	15.7	358.5	376	18				
15:30	8	377			377	15.7	374.2	376	2				
16:30	9				0	0.0	374.2	376	2				
17:30	10				0	0.0	374.2	376	2				
18:30	11				0	0.0	374.2	376	2				
19:30	12				0	0.0	374.2	376	2				
20:30	13				0	0.0	374.2	376	2				
21:30	14				0	0.0	374.2	376	2				
22:30	15				0	0.0	374.2	376	2				
23:30	16				0	0.0	374.2	376	2				
0:30	17				0	0.0	374.2	376	2				
1:30	18				0	0.0	374.2	376	2				
2:30	19				0	0.0	374.2	376	2				
3:30	20				0	0.0	374.2	376	2				
4:30	21				0	0.0	374.2	376	2				
5:30	22				0	0.0	374.2	376	2				
6:30	23				0	0.0	374.2	376	2				
7:30	24				0	0.0	374.2	376	2				
8:30	25				0	0.0	374.2	376	2				
9:30	26				0	0.0	374.2	376	2				
10:30	27				0	0.0	374.2	376	2				
11:30	28	377	6342	6582	13301	554.2	928.4	28947	28019		28571	1 x Petro Mariner barge	28571
12:30	29	377	6342	6582	13301	554.2	1482.6	28947	27464				
13:30	30	377	6342	6582	13301	554.2	2036.8	28947	26910				
14:30	31	377	6342	6582	13301	554.2	2591.0	28947	26356				
15:30	32	377	6342	6582	13301	554.2	3145.3	28947	25802				
16:30	33	377	6342		6719	280.0	3425.2	28947	25522				
17:30	34	377			377	15.7	3440.9	28947	25506				

Daylight Hours
Darkness Hours
First Operational Period
Second Operational Period

Section 1.6.12.1.2 Spill Response if Winds are from the North

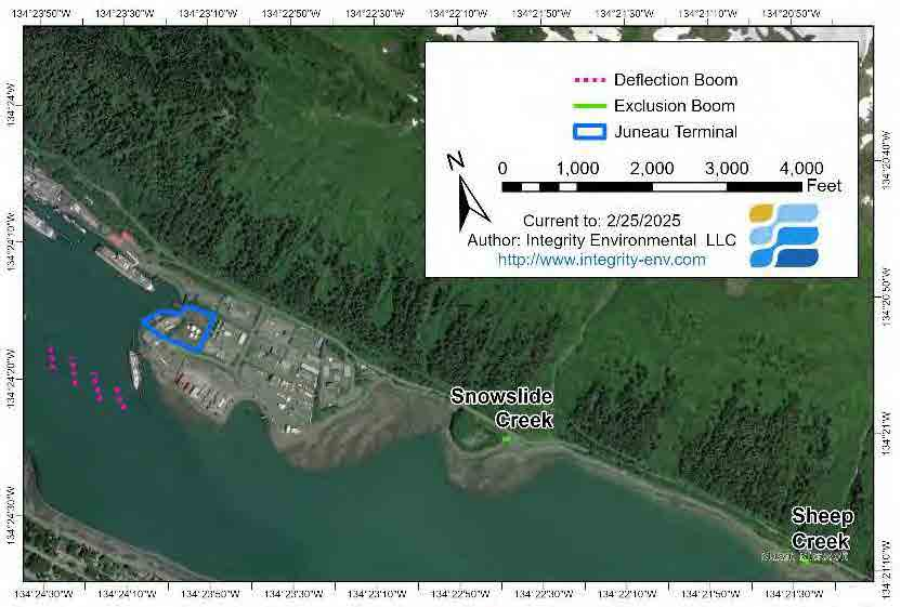
18 AAC 75.449(a)(6)(O)

The prevailing wind in the Juneau area is generally from the south in the spring and summer months and from the north in the fall and winter.

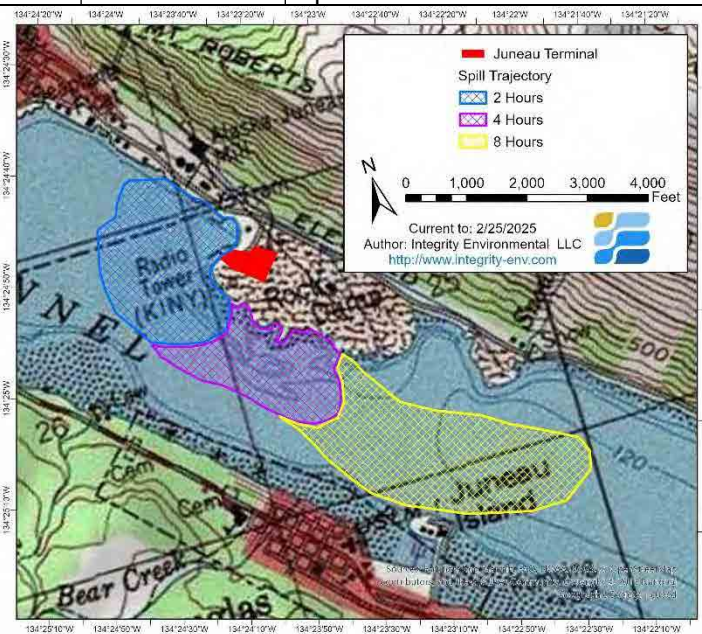
Should the winds be from the north, the spill response would not change significantly. The same tactics would be deployed, but the on-water tactics would be shifted to the waters south of the Juneau Terminal. A number of anadromous streams located south of the tank farm could potentially be threatened with winds from the north or northwest. During low tide, the Gastineau Channel and aerial surveillance of the spill, the Terminal Manager would determine which environmentally sensitive areas would require protection. Additionally, if there are active fish processors in the spill path, diversion or deflection boom would be deployed to protect those areas. The Terminal Manager would monitor the tide charts (NOAA 2025b) and boom would be deployed during flood tide. Regular maintenance would be required throughout the response to ensure boom remains effective and in place.

The following ICS 204 Forms (Task Force 3 and 6) display the alternate projected spill trajectory should the wind from the north. The spill response tactics discussed previously (Task Forces 1, 2, 4, 5, and 7-9) should be deployed south of the Juneau Terminal if the wind is in that direction.

ICS 204 Task Force 3 Deflection and Exclusion Booming Operations

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 3		4. Deflection and Exclusion Booming Operations			
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	6	P49/ SEAPRO	Dock		☒
Containment Boom	700'	P49	Dock	Deflection and exclusion booming	☒
Anchor Bouy system	4	P49	Dock	Used to secure boom	☒
Work skiff	1	P49	Dock	Boom deployment	☒
Work boat (21')	1	SEAPRO	Dock	Boom deployment	☒
7. Assignments: Deploy five 100' angled strands of boom west of the spill area to deflect fuel towards the facility to deflect any oil returning with the tide towards the Facility dock area where it can more easily be contained and recovered and prevent oil from continuing down the Channel. Deploy 100' exclusion boom at the entrance of Snowslide Creek and Sheep Creek, anadromous streams Boom that is on tidally influenced waters will require maintenance through tide changes. The following actions should be taken to ensure the boom is effective: • Readjust at least every 6 hours to maintain boom shape through tide cycles with the P49 response skiff. • Continuous monitoring of system is required. • Deployment planning is based on average high tidal conditions. See STAR Manual Section B-III-12-1, Exclusion Boom and Section B-III-13, Deflection Boom.					
					
8. Special Instructions for Division/Group Water operations – requires PFD; read tides and currents when provided. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
P49 Responders (1)		Channel 10		N/A	
SEAPRO Responders (5)		Channel 10		N/A	
Total Responders:				6	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

ICS 204 Task Force 6 Aerial Surveillance

1. Incident Name Juneau Terminal Scenario		2. Operational Period (Date/Time) From: 02/15 0730 To: End		Assignment List ICS 204-OS	
3. Task Force 6			4. Aerial Surveillance		
5. Operations Personnel		Name	Affiliation	Contact # (s)	
Initial Incident Commander:		Facility Manager	P49	Ch 10/cell	
Operations Section Chief:		P49 General Manager	P49	Ch 10/cell	
6. Resources Assigned This Period "X" indicates special instructions					
Type	Qty.	Ownership	Staging Area	Notes/Remarks	
Responders	1	SEAPRO	Yard	On-water spill tracking. Responder is FAA certified to operate drone.	☒
Waterproof drone	1	SEAPRO	Yard	On-water spill tracking, once available.	☒
Contracted helicopter and operator	1	TEMSCO	Juneau Airport	Initial overflights and/or if adverse weather conditions prevent operations of the drone.	☒
7. Assignments: Spill trajectory at hour 2, 4 and 8 without recovery operations.					
8. Special Instructions for Division/Group Air operations – Requires mustang suit. All operations require PPE. All responders must sign tailgate safety brief and read SSHP (when available). Read tides and currents when provided. Immediately report sighting of oiled wildlife to the IC.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
<u>Name/Function</u>		<u>Radio: Freq/System/Channel</u>		<u>Phone</u>	
SEAPRO Responder (1)		Channel 22		N/A	
Contract Helicopter Operator (1)		Channel 22		N/A	
Agency Personnel (2)		Channel 10		N/A	
Total Responders:				4	
10. Prepared By (Resource Unit Leader) Planning Section			11. Approved By (Planning Section Chief) Date/Time		
ASSIGNMENT LIST				ICS 204-OS	

Section 1.6.13 General Procedures for Responding to Greatest Possible Discharge

18 AAC 75.449(a)(10)

The greatest possible discharge at the Juneau Terminals can reasonably be assumed to be the catastrophic failure of multiple tanks within the secondary containment area and a release outside containment. Theoretically this is estimated to be between 1,1012,961 and 4,472,253 gallons. The cause of this type of discharge could potentially be initiated by an earthquake, tsunami, significant volcanic eruption with lahars, or a storm event. The likelihood of a greatest possible discharge at the facility is extremely low.

Based on the potential causes for a failure of this type, safety would be the top priority before attempting to clean up the release. A full assessment of the facility would be necessary as follows. Please see Sections 1.1 and 1.3.

Once established, the IMT would assess if additional notifications beyond what is required for an ADEC RPS spill scenario are necessary, including local businesses, local government, state government agencies, among others.

Once it has been determined that the area is safe to enter, the response would follow similar initial steps as outlined in the ADEC RPS spill scenario. See Section 1.6.12 of this plan for more information. To respond to a spill of this magnitude, additional responders and spill response equipment would be necessary. Through P49's contract with SEAPRO, additional responders and equipment would be mobilized to the facility from other equipment hubs (see Section 1.5 of this plan).

Additional equipment that may be necessary is as follows:

- Containment boom
- Skimming units for on-water, shoreside, and land recovery operations
- Multiple contingency storage devices including tanks and bladders
- Barges for contingency storage

Contaminated solid waste and liquid waste would be anticipated to be significantly higher than the ADEC RPS spill scenario. For this reason, a larger temporary storage site for waste would be necessary. The appropriate permits would be obtained before constructing the storage site (see Section 1.2.2).

Lastly, with such a large volume being released to the environment, there is potential that the release would reach further than the five-mile planning distance and may threaten or impact other environmentally sensitive areas. At the Terminal Manager's discretion, exclusion booming may be deployed to protect these areas. Additional shorelines could also potentially be impacted and would require cleanup (see Section 1.6.11 for information on shoreline cleanup).

Section 1.6.14 Medium Spill and Maximum Most Probable Discharge Scenario

EPA Medium Scenario Planning Volume: A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility (Tank 22), whichever is less, provided that this amount is less than the worst-case discharge amount. Ten percent of 1,015,232 gallons is 101,523 gallons. The medium spill scenario is therefore 36,000 gallons/ 857 bbls.

USCG Maximum Most Probable Planning Volume: Maximum Most Probable Discharge (MMPD) is 10 percent of USCG WCD ($0.1 * 427$ bbls) and is equal to 43 bbls or 1,806 gallons.

The EPA volume of a medium oil spill is calculated to be 36,000 gallons/857 bbls. The comparable USCG response planning volume is the maximum most probable discharge volume, which is calculated to be 43 bbls. This scenario is written for the EPA response planning standard because it is the larger of the two.

Because the Juneau Terminals consists of two separate tank farms and the worst case discharge scenario was written for the Juneau Terminal, the medium spill/maximum most probable discharge scenario is written for a release at the Douglas Island Terminal to show P49 has the capability to quickly respond to a major release at either plant.

Scenario Summary

On the morning of June 15 at 1200h, while a vessel is being fueled with diesel at the Douglas Island Terminal fuel float, one of the valves on the diesel line fails. It takes roughly 15 minutes for the valve failure to be discovered and fuel discharges into Gastineau Channel. It is estimated that approximately 36,000 gallons/857 bbls is released. The tide is a slack tide that is about to ebb, winds are from the southeast at 0-5 knots. The temperature is 54°F with the current of the tide to the north.

Response Actions for a Medium Spill

- The release flows directly into the waters of Gastineau Channel. The person-in-charge notifies the Terminal Manager and the barge captain of the spill. The barge captain orders the pumps to immediately be shut off, and the person-in-charge initiates valve closures (after pump pressure is reduced). Restrict access until the spill is completely removed. Delivery of product to the tank yard is controlled by the delivery barge. During bulk delivery, a tank yard watch-person is on constant duty and maintains radio communications with the vessel. The barge captain prepares the barge to leave the dock.
- The Plant Manager serves as the initial Incident Commander (IC) (See Figure 3.3-1 for ICS structure and contact information). Response actions will be directed by the IC. The IC notifies ADEC and NRC of the spill. A site-specific safety plan will be completed. All responders will have appropriate personal protective equipment. The IC notifies ADEC and NRC of the spill. The IC contacts SEAPRO about mobilizing the Oil Response Barge (ORB) and a work skiff. A site-specific incident safety plan will be completed. All responders will have appropriate personal protective equipment (PPE).

- P49 containment boom is mobilized to the spill site. Once the barge has left the dock, the work skiff is used to deploy containment boom around the fuel float and anchored at the shoreline to contain the fuel nearshore. The containment boom is lined with sorbent boom.
- The P49 Skim-Pak 4300-SH skimmer is deployed within the containment boom off the fuel float and begins recovering fuel. The skimmer discharges to available P49 tank trucks and trailers.
- Additional response equipment arrives from the SEAPRO Juneau hub. The ORB is equipped with one Lori HK 3-3.5 skimmer. The P49 work skiff and the SEAPRO work skiff tow the ORB in Gastineau Channel, and the skimmer recovers fuel that is outside of the containment boom.
- Sorbent boom, rolls, and pads are used to recover the thinnest concentrations of fuel on the water after the skimmers are no longer effective.
- Recovered liquids (diesel) are processed using ADEC approved method and returned to service. Material that cannot be processed locally must be disposed of in a manner approved by ADEC. The Incident Commander will arrange for proper disposal of all recovered oil, oily sorbents, and other oiled debris.
- All equipment is cleaned and returned to storage. Damaged equipment is repaired or replaced. A vessel decontamination area is established if necessary to clean any vessels that may have been oiled during the response.

Community resources are sufficient to respond to a medium spill (up to 36,000 gallons), and additional response resources are not necessary.

Medium Spill / Maximum Most Probable Discharge Scenario – Douglas Island Terminal–Release from Pipeline			
Response Type:		Type / Amount:	
Pipeline valve failure at the fuel float		Ultra-low sulfur diesel Est. amt. discharged: 36,000 gallons (857 bbls) Est. amt. to reach open water: 36,000 gallons (857 bbls) Est. amt. to remain on land: None	
Time:	12:00 est. incident 12:15 discovery	Wind:	5 knots, winds from the SE
Season:	Summer, June 15 th	Temperature:	54° F
Visibility:	10 miles	Location:	Juneau/Gastineau Channel
Low Tides:	10:36 at -1.07 feet 22:51 at 4.36 feet	High Tides:	03:56 at 15.86 feet, 17:13 at 14.25 feet
Dawn:	03:51	Dusk:	22:05
Weather:	Clear skies		
Source			
One of the valves on the diesel line fails during a barge transfer. The maximum flow rate during a barge transfer is 1,200 bbls/hr. It takes roughly 15 minutes for the spill to be discovered and 30 minutes to stop the leak. A total of 36,000 gallons (857 bbls) diesel is released onto the dock and into the waters of Gastineau Channel. The weather is sunny with winds from the southeast.			
Section 5.2 details calculations used to determine the amount of oil spilled in this scenario.			
Expected Trajectory (Section 1.6.3)			
For this scenario, assuming an average current of 0.5 knots and a maximum wind speed from the southeast at five knots, product is projected to move at approximately 3,949 feet per hour (0.75 mph). This estimate is derived by adding three percent of the wind speed to the current.			
Based on a rate of movement of about 3,949 feet per hour (until the tides change), a constantly incoming tide, and that no containment or control actions had occurred, one could reasonably expect that diesel would be 4,000 feet past the breakwater located northeast of the facility after two hours. After four hours, diesel would be at the Subport; from there it would swirl and eddy in the area, impacting areas both west and north. When the tides change, the current velocity would be working against the wind, decreasing the rate of oil spread and actually causing it to reverse direction at times.			
NOAA trajectory projections will be obtained and considered by the UC. See Section 1.6.3 of this plan for procedures.			

Regional Geography (Section 3.9)

P49's Douglas Island Terminal is located along the waters of Gastineau Channel. Drainage from the terminal generally drains towards the north and ultimately to the waters of Gastineau Channel.

Sensitive shorelines in the region include sheltered impermeable rocky shores and gravel beaches. The distance of water area and shoreline potentially affected by a spill is recognized as at least five miles either in or out of Gastineau Channel, dependent upon tidal and weather-driven water currents. Tidal currents in Gastineau Channel current floods northwest and ebbs southeast past Juneau with a velocity of 2.0 knots (NOAA 2023).

Discharge Tracking (Section 1.6.3)

- Initial visual assessment is maintained by crew at the terminal.
- P49 personnel uses visual observation and its response skiff for initial on-water surveillance.
- Oil spill trajectory forecasts are obtained from NOAA through SEAPRO. An oil sheen is observed moving slowly NW up Gastineau Channel.

Protection of Environmentally Sensitive Areas (Section 1.6.10 and 3.9)

- P49 consults with ADEC, ADF&G, USFWS, and NMFS representatives on sensitive areas.
- Potential ESAs NW of terminal: Boat harbors and anadromous streams in the area.
- Priority is to contain the oil at the spill source before it threatens a sensitive area.
- Trajectories are monitored according to tide.
- Exclusion boom is deployed to protect the anadromous streams north of the terminal. The Terminal Manager will determine if any boat harbors are threatened and will deploy exclusion boom at those sites as necessary.
- See STAR Manual, B-III-12, Exclusion booming, Figure EX-3 exclusion boom configuration will be used with SEAPRO and/or P49's equipment. Also see STAR Manual, B-III-13, Deflection booming for another tactic for protecting ESAs.

Recovery Strategies (Section 1.6.6)

- Containment boom is deployed at the spill site to contain the released oil. The fuel float is constructed on pontoons on the water. The design of the fuel float does not allow fuel to escape underneath it. Containment boom is deployed around the fuel float and anchored at the shoreline. This contains the release near the shoreline. The containment boom is lined with sorbent boom to passively recover some of the released product. See STAR Manual, Section B-III-2, Containment Boom.
- P49 skiff is used to conduct on water boom adjustment or a shore crew where applicable.
- Utilize P49 skiffs and SEAPRO responders to skim and sweep for oil recovery as needed in Gastineau Channel.
- P49 will contract personnel and equipment to perform shoreline cleanup in accordance with the IAP.
- STAR Manual, Section B-III-11, Passive Recovery operations will be used once all mechanically recoverable fuel has been recovered. Sorbent boom and sweeps will be deployed to pick up the thinnest concentrations of oil.
- A combination of P49 and SEAPRO response equipment will be used to accomplish the tactics described above.

Response Resources for This Scenario (Section 3.6)

Personnel	Available	Hours to Scene
Juneau Terminal TERT (Juneau)	5	0.5
SEAPRO w/in 2 hrs (Juneau)	10	2
Total	15	

Boom	Feet	Hours to Scene	Transportation Method
P49 containment boom (Douglas Island Terminal)	1,600	0.5	Truck
Total	1,600		

Sorbent Boom	Feet	Hours to Scene	Transportation Method
P49 5" sorbent boom (Douglas Island Terminal)	200	0.5	Truck
P49 5" sorbent boom (Juneau Terminal)	160	1	Truck
SEAPRO 5" sorbent boom (Juneau)	840	2	Truck
Total	1,200		

Skimmers/Recovery Devices	Available	Hours to Scene	Transportation Method
P49 Skim-Pak 4300-SH Skimmer (Douglas Island Terminal)	1	0.5	Truck
P49 Skim-Pak 4200 (Juneau Terminal)	1	1	Truck
SEAPRO Vikoma-Komara 12K	1	2	Truck
SEAPRO Elastec Disc X30 Skimmer	1	2	Truck
Total	4		

Vessels	Available	Hours to Scene	Transportation Method
P49 18ft. skiff (Douglas Island Terminal)	1	0.5	Own Power
P49 18' landing craft (Juneau Terminal)	1	1	Own Power
Total	2		

Temporary Storage	Available	Capacity ea. (gal)	Total Capacity (gal)	Time to Scene (hrs)	Transportation Method
P49 Tank Truck Fleet (Juneau Terminal)	2	2,000	4,000	0.5	Own Power
P49 Tank Truck Fleet (Juneau Terminal)	2	2,600	5,200	0.5	Own Power
P49 Tank Truck Fleet (Juneau Terminal)	2	2,900	5,800	0.5	Own Power
P49 Tank Truck Fleet (Juneau Terminal)	1	4,300	4,300	0.5	Own Power
P49 Tank Truck Fleet (Juneau Terminal)	1	2,790	2,790	0.5	Own Power
P49 Tank Truck Fleet (Douglas Island Terminal)	5	4,700	23,500	0.5	Own Power
P49 Tank Truck Fleet (Douglas Island Terminal)	3	5,300	15,900	0.5	Own Power
SEAPRO Canflex "Sea Slug" FCB - 60 Bladder (Juneau)	1	6,594	6,594	2	Truck
SEAPRO 249 bbl Response Barge - 55ft	1	10,458	10,458	2	Own Power
Total Storage in Juneau (gal)			78,542		

Skimmers	EDRC ¹ BBL/DAY	EDRC BBL/HR	EDRC GAL/HR
Skim-Pak 4300-SH	117	4.9	204.8
Skim-Pak 4200	648	27	1,134

¹Effective Daily Recovery Capacity (EDRC): Manufacturer's rate in BPH times 24 hours times 20% = EDRC. The EDRC or Oil Recovery Efficiency Factor, is the ratio, expressed as a percentage, of the volume of oil recovered to the volume of total liquids recovered; it does not count down time of the equipment when it is being set up, or when recovery is halted to empty out temporary storage.

Table 1.6-5 Boom Requirements by Location (Medium Spill)

Location	Type/Amount (ft)	
	Containment	Sorbent ¹
Juneau Douglas Terminal Fuel Float	1,200	1,200
Kowee Creek – exclusion boom	100	--
Aurora Harbor and Harris Harbor	300 ²	--
TOTAL	1,600	1,200

¹Sorbent boom will be deployed inside around the release site. It will be replaced every 6 hours in the first operating period and every 12 hours in the second operating period or as necessary.

²The Plant Manager will determine which, if any, boat harbors are within the spill path.

Table 1.6-6 Recovery Capacity Per Operational Period (Medium Spill)

Skimmer	Manufacturer's Rated Capacity (bbl/hr)	Oil Recovery Efficiency Rate	Hours Operating	Effective daily oil capacity (barrels)
	<i>T</i>	<i>E</i>	<i>U</i>	<i>R</i>
SkimPak 4200	24.4	0.2	10	48.8
SkimPak 4300	135	0.2	10	270
Vikoma-Komara 12K	112.9	0.2	8	180.6
Elastec Disc X30 Skimmer	257.1	0.2	8	411.4
Total Op Period 1				910.8
TOTAL RECOVERY			38,253.6 gal / 910.8 bbl	

See Section 1.6.12.1.1 for information on calculation used to populate this table.

Figure 1.6-1- Douglas Island Terminal Shoreside Containment and Recovery Operations

Current to: 3/14/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>

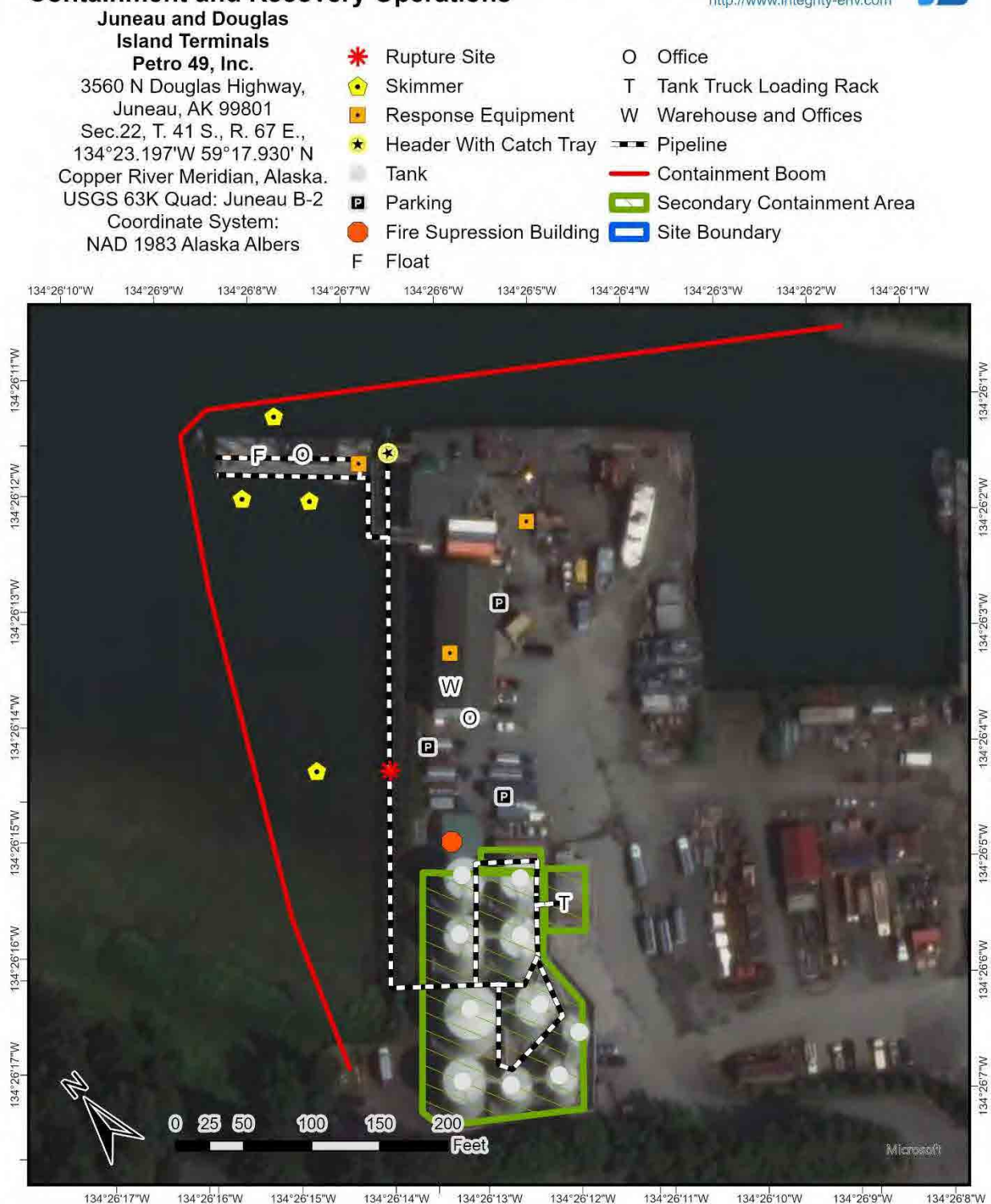


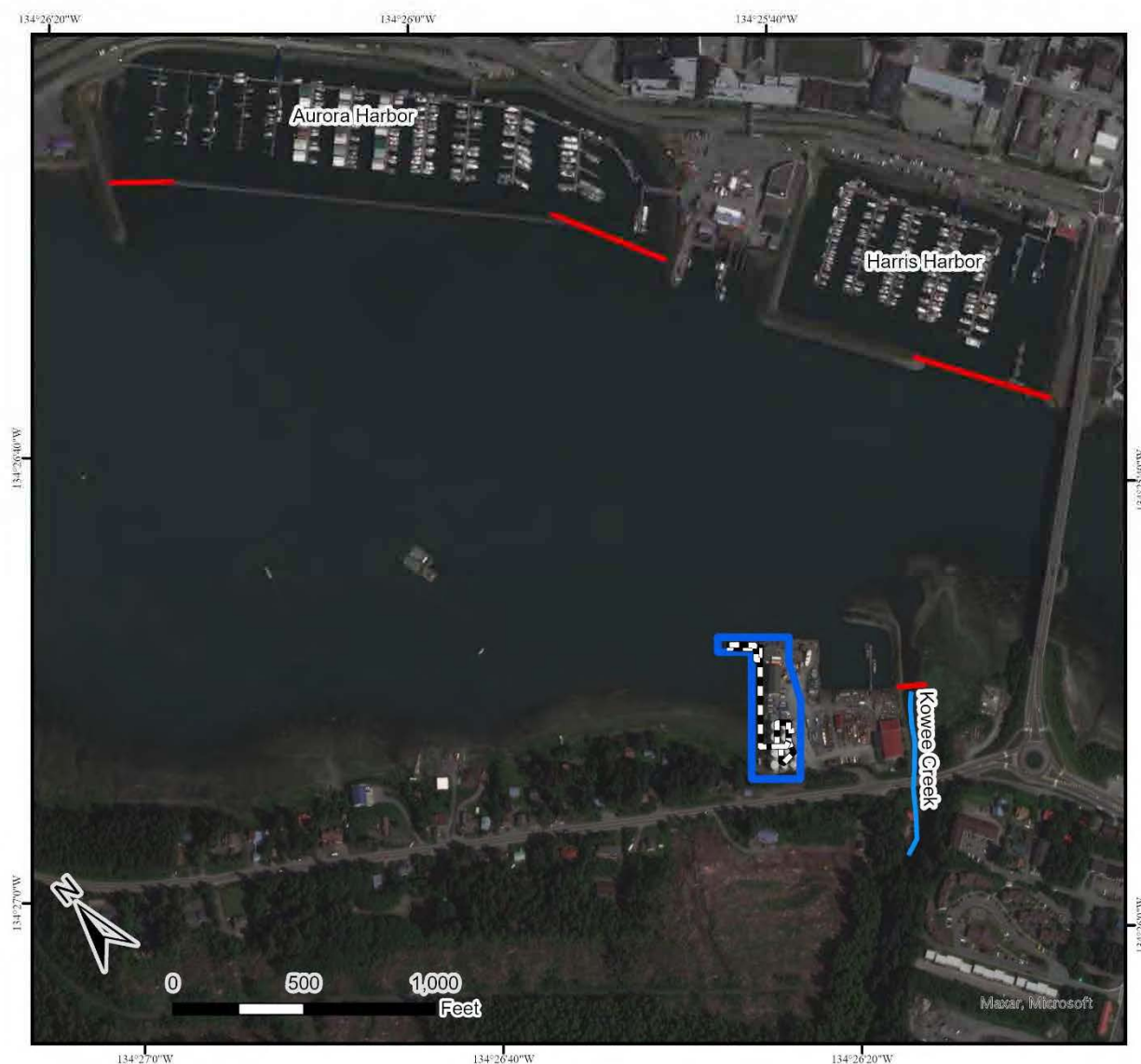
Figure 1.6 -2 Douglas Island Terminal Exclusion Booming

Current to: 3/14/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



**Juneau and Douglas
 Island Terminals
 Petro 49, Inc.**
 3560 N Douglas Highway,
 Juneau, AK 99801
 Sec.22, T. 41 S., R. 67 E.,
 134°23.197'W 59°17.930' N
 Copper River Meridian, Alaska.
 USGS 63K Quad: Juneau B-2
 Coordinate System:
 NAD 1983 Alaska Albers

-  Pipeline
-  Boom Placement
-  Anadromous Streams
-  Site Boundary



Section 1.6.15 Small Spill and Average Most Probable Discharge Scenario

EPA Small Scenario Planning Volume: A discharge of 2,100 gallons or less, provided that this amount is less than the worst-case discharge amount. 2,100 gallons is less than the worst-case discharge which is 2,411.8 gallons. The small scenario planning volume is therefore 2,100 gallons/50 barrels.

USCG Average Most Probable Discharge Scenario Planning Volume: Average Most Probable Discharge (AMPD) is one percent of USCG WCD ($.01 * 427$ bbls) and is equal to 4.27 bbls.

The EPA small spill of non-persistent oil is 2,100 gallons (50 barrels). The comparable USCG AMPD spill is an average most probable discharge calculated to be five barrels (rounded up). This scenario is written for the EPA response planning standard because it is the larger of the two.

Scenario Summary

A barge is pumping a load of diesel fuel to a storage tank at the Douglas Island Terminal when the cargo hose is hit with a pressure surge. The diesel fuel leaks between the barge and the shoreside header. Noticing the spill, both the shoreside person-in-charge and the tankerman take immediate steps to secure the transfer operations and stop valves on either end of the cargo discharge hose. It is estimated 2,100 gallons/50 barrels is released before the transfer is stopped.

- The spill occurs at 0900h on October 15. It is an ebb with winds to the southeast at zero to five knots. The temperature is 38°F with the current to the southeast.
- The fuel flows over the dock and into Gastineau Channel. With the current flowing to the southeast, the fuel is pushed up against the shoreline adjacent to the tank farm.

In this scenario, the required resources are available locally and can be deployed within 30 minutes.

Response Actions for a Small Spill

- The person-in-charge notifies the Terminal Manager and the barge captain of the spill. The barge captain orders the barge pumps to immediately be shut off and the person-in-charge initiates valve closure (after pump pressure is reduced). Access is restricted until the spill is completely removed. Delivery of product to the tank yard is controlled by the delivery barge. During bulk delivery, a tank yard watchperson is on constant duty and maintains radio communications with the vessel. The barge captain prepares the barge to leave the dock.
- Response actions will be directed by the Incident Commander. The IC notifies ADEC and NRC of the spill. A site-specific incident safety plan will be completed. All responders will have appropriate personal protective equipment (PPE).
- The IC leads the P49 TERT team to quickly deploy sorbent sweeps and then containment boom around the dock in order to contain the oil that has reached the water. This occurs within one hour after the spill.

- The tankerman and IC evaluate the spill and decide that the recovery equipment and manpower available from the plant are sufficient to handle the spill.
- The Petro 49 Skim-Pak 4300-SH skimmer (EDRC: 1,140 gal/hr) is deployed at the shoreline near the tank farm and discharges to the facility's tank trucks and trailers. With the EDRC being 1,140 gal/hr, the skimmer should be able to recover nearly all of the fuel on the water within approximately two hours.
- The oil discharge to water is tracked from shore. The Incident Commander will determine if any anadromous streams or boat harbors are threatened. Exclusion booming would be deployed as described in the worst-case discharge scenario if applicable.
- Once skimmer is no longer effective at recovering fuel, sorbent sweeps and pads are deployed to recover the thinnest concentrations of fuel.
- The recovered liquids (diesel) will be processed in accordance with the approved waste water treatment plan. Material that cannot be processed locally must be disposed of in a manner approved by the Alaska Department of Environmental Conservation. The Incident Commander will arrange for proper disposal of all recovered oil, oily sorbents, and other oiled debris.
- Within 15 days of completion of the spill cleanup, a written report of the spill is submitted to the appropriate agencies.

Community resources are sufficient to respond to a small spill (up to 2,100 gallons) and additional response resources are not necessary.

Section 1.7 Nonmechanical Response Options**18 AAC 75.449(a)(8)**

Not applicable at this facility.

Section 1.8 Facility Description

*18 AAC 75.449(a)(9), 18 AAC 75.451(b)
18 AAC 75.451(b)(7), and 18 AAC 75.451(c)(1)*

This section includes diagrams of the facility for reference in conducting emergency operations, with locations of response equipment and other features pertinent to the response plan clearly marked.

See Section 3.1 of this plan for a complete facility description.

Section 1.8.1 Marine Terminal

Juneau Terminal: The Juneau Terminal consists of a warehouse/main office building, tank farm with secondary containment, a TTLR, a main dock, a fuel float with a small dock office, a valve yard, and associated piping. The 100 ft. long by 40 ft. wide timber pile main dock supports two cargo headers, one owned and operated by P49 and one owned and operated by Delta Western, along with two hose reel dispensers. The independent timber fuel float measures approximately 90 ft. long by 20 ft. wide, supports seven hose reel dispensers and a small dock office. Access to the main dock is by a 30 ft. long gangway. There are five lines comprising six-inch nominal pipe size (NPS) welded steel pipe, extend between the marine header and the tank farm. The capacity of all pipes in the marine transportation related portion of the facility is 23 barrels. This capacity is used for calculation of the USCG WCD planning volume (see Section 5.3).

From the tank farm to the filter area, the distribution piping is a common line with the marine cargo piping controlled with gate valves. At the filter area, gate valves are used to control flow to the docks and/or TTLR. Portions of buried and above-ground distribution piping are used to transfer product to the marine vessel dispensers located on the dock and float. The above-ground distribution piping tees where the float is connected to the dock. At the float there are four distribution lines comprised of four-inch NPS welded steel pipe, and one distribution line comprised of six-inch NPS welded steel pipe. At the dock there are five distribution lines comprised of four-inch NPS welded steel pipe. Five distribution lines, comprising buried four-inch NPS welded steel pipe, transfer product to the tank truck loading rack and vehicle dispensers. Each line is equipped with a gate valve at the bulk tank, at the filter area, and at each dispenser.

Sections of buried and above-ground cargo piping are used to transfer product from the marine header to the tank farm. The five lines extending between the marine header and the tank farm daylight north of the office building in the filter area. Each line is equipped with a gate valve at the marine header, at the filter area, and at the bulk tank.

Tank trucks are loaded directly from the bulk storage tanks by gravity feed. The area is covered by a roof and mounted on a concrete pad incorporating a secondary containment and drainage system. There are seven loading arms and two hose reels. See Section 2.5.5 for details about secondary containment.

Douglas Island Terminal: The main features of the Douglas Island Terminal are a warehouse building with offices, a tank farm with secondary containment, a TTLR, a Marine Terminal, a fuel float, a vapor recovery unit (VRU), a foam fire suppression building, and associated pumps, valves, and piping. A wood pile trestle approximately 4,225 ft. long and 12 ft. wide supports cargo and service pipelines running between the Marine Terminal and the Tank Farm. The Marine Terminal is a 20 ft. by 12 ft. wood pile support dock with fuel headers. There are five 4-inch cargo lines and one 6-inch cargo line running between the marine header and the Tank Farm. The capacity of all pipes in the marine transportation related portion of the facility is 428 barrels. This capacity is used for calculation of the USCG WCD planning volume (see Section 5.3).

The VRU system recovers vapor from gasoline products loaded at the TTLR. The gas vapor is condensed to a liquid through a pressure reducing regenerating process and returned to the bulk storage tanks (Tanks 2 and 3). See Section 3.1 for further details on the VRU system. The foam fire suppression system includes a low expansion foam for the product tanks, pump/motor area, secondary containment, and the TTLR. The TTLR and the pump/motor area have heat sensors to automatically trigger the foam system, and the tanks and secondary containment area have to be manually activated from the control building. When the system is activated, it alerts the fire department and sounds an audio-visual alarm. See Section 1.6.2 for more information on the fire suppression system.

The 24 ft. by 120 ft. concrete marine fuel float is moored with pilings north of the marine header. The fuel float has an office and seven fuel dispensers. Each dispenser has an electric solenoid valve. An emergency shutoff switch is located at each end of the office building. There are three 2-inch and one 3-inch service lines to the float. A bridge from the sheet pile bulkhead over the pipe support trestle provides access to the ramp, which descends to the fuel float. The service lines to the fuel float are supported on the outside of the ramp. Each service line has a manual shutoff valve at the top of the gangway.

The TTLR is a 32 ft. by 40 ft. covered structure. The loading area is lined with concrete. There are six pumps serving 11 loading arms. There are four pumps that serve the seven product dispensers on the fuel float. See Section 2.5.5 for details about secondary containment.

Simultaneous Transfers: The facility can transfer fuel to or from a maximum of six vessels simultaneously if they were all small vessels. The length of the vessels served varies from 12 ft. to 200 ft. The types of vessels transferring fuel are fishing vessels, cargo vessels, tugboats, workboats, recreational vessels, commercial vessels, and tank barges.

Section 1.8.2 Mobile Marine Facility

The Juneau Terminal includes mobile fueling operations. Tank trucks are used for mobile fueling operations at any dock in the Juneau area. Mobile fueling is typically conducted in Auke Bay at the Gitkov Dock and the Alaska Marine Highway System (AMHS) facility. See Section 3.1.4.2 of this plan for mobile vessel fueling procedures.

Figure 1.8-1 General Vicinity Map

Current to: 2/25/2025
 Author: Integrity Environmental, LLC
<http://www.integrity-env.com>



**Juneau and Douglas Island Terminals
 Petro 49, Inc.**

Juneau Terminal: 1076 Jacobsen Drive, Juneau, AK 99801

Within: Sec.25, T. 41 S., R. 67 E.,
 134°23.633'W 58°17.389'N

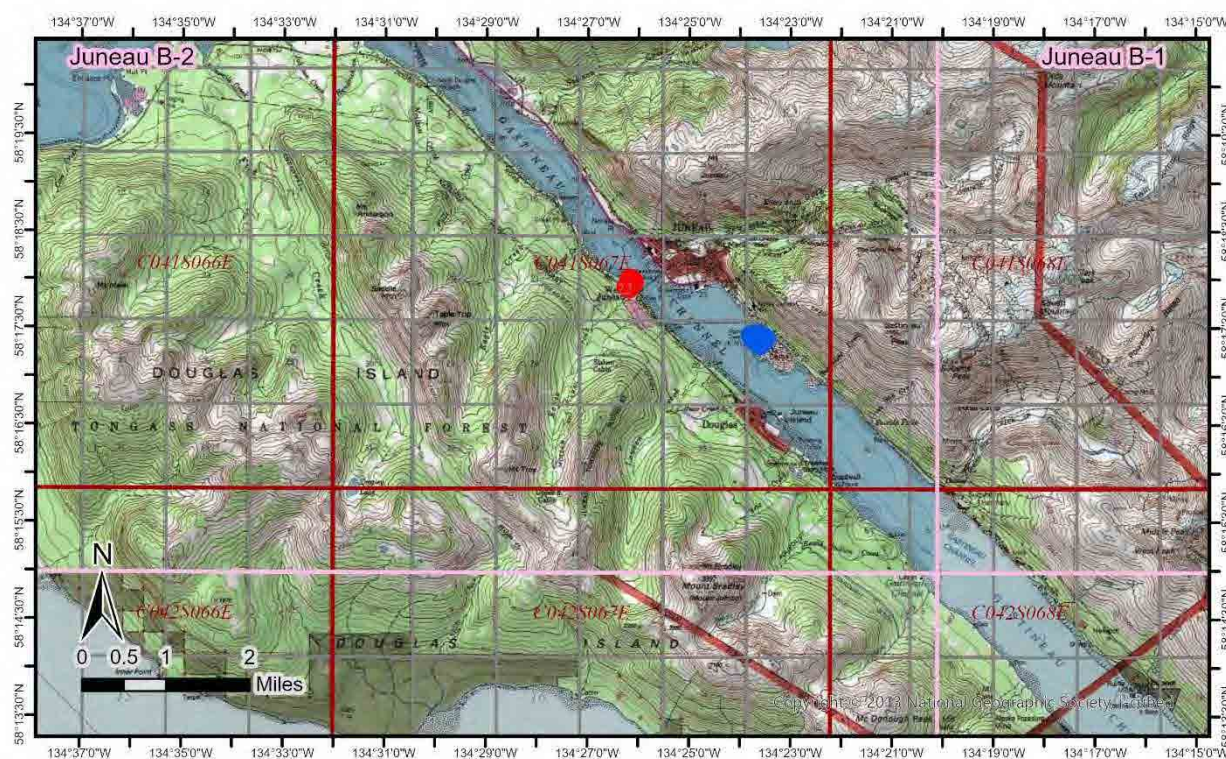
Douglas Island Terminal: 3560N Douglas Highway, Juneau, AK 99801

Sec.22, T. 41 S., R. 67 E.,
 134°23.197'W 59°17.930' N
 Copper River Meridian, Alaska.

USGS 63K Quad: Juneau B-2

Coordinate System: NAD 1983 Alaska Albers

- Juneau Terminal
- Douglas Island Terminal
- USGS Topography Map
- Township
- Section



Juneau Terminal Figures

Figure 1.8-2 Juneau Terminal Site Layout

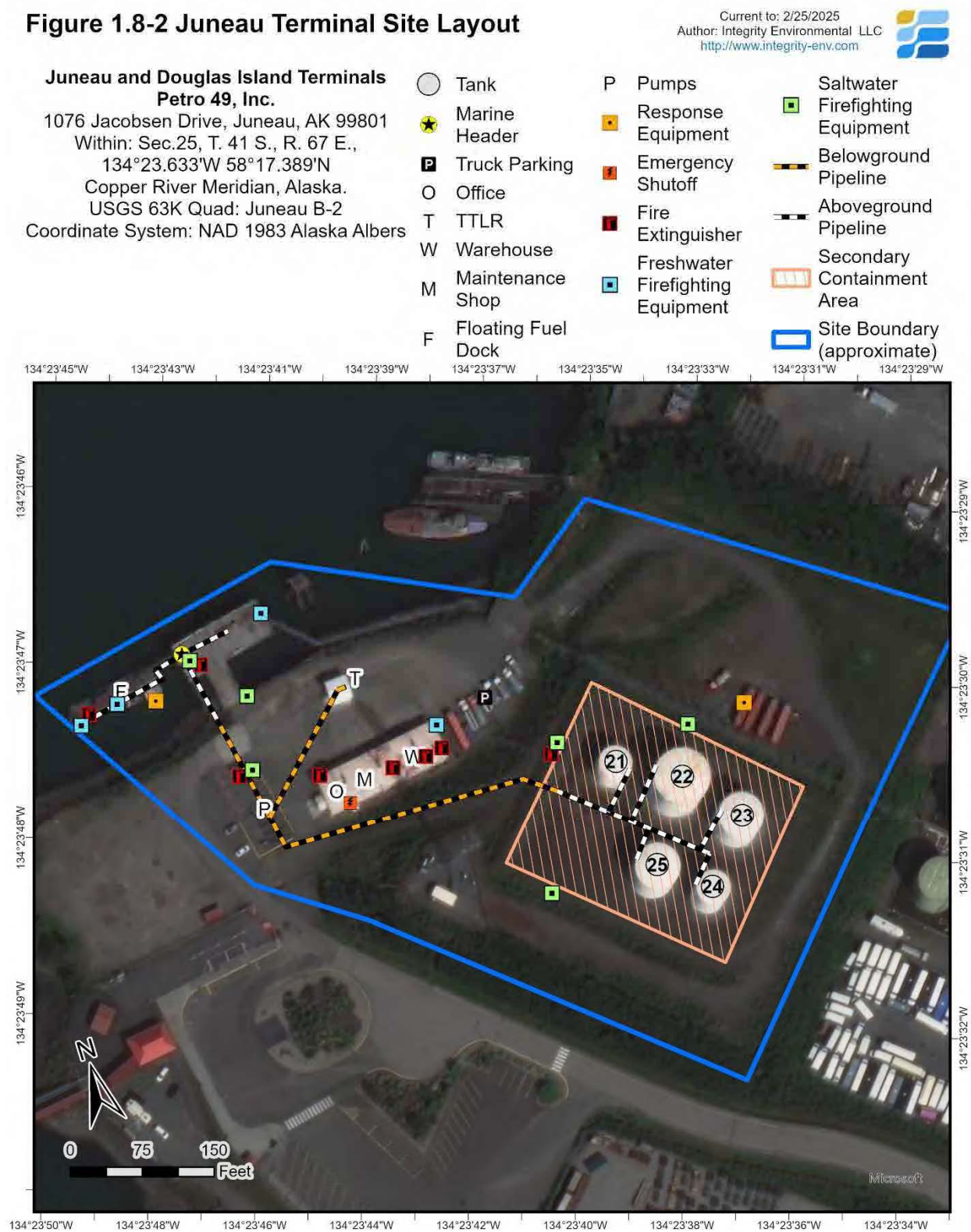


Figure 1.8-3 Juneau Terminal Marina Site Layout

Juneau and Douglas Island Terminals
Petro 49, Inc.
 1076 Jacobsen Drive, Juneau, AK 99801
 Within: Sec.25, T. 41 S., R. 67 E.,
 134°23.633'W 58°17.389'N
 Copper River Meridian, Alaska.
 USGS 63K Quad: Juneau B-2
 Coordinate System: NAD 1983 Alaska Albers

- ★ Marine Header
- T TTLR
- P Pumps
- M Maintenance Shop
- O Office
- F Floating Fuel Dock
- ▼ Valve Shutoff
- Fire Extinguisher

Current to: 3/12/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



- Freshwater Firefighting Equipment
- Saltwater Firefighting Equipment
- Catch Basin
- OWS
- Belowground Pipeline
- Aboveground Pipeline
- Fuel Dispensing Area



Figure 1.8-4 Juneau Terminal Tank Farm Site Layout

Current to: 3/12/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



- Juneau and Douglas Island Terminals**
Petro 49, Inc.
 1076 Jacobsen Drive, Juneau, AK 99801
 Within: Sec.25, T. 41 S., R. 67 E.,
 134°23.633'W 58°17.389'N
 Copper River Meridian, Alaska.
 USGS 63K Quad: Juneau B-2
 Coordinate System: NAD 1983 Alaska Albers
- Tank
 - ▲ Valve
 - Fire Extinguisher
 - Saltwater Firefighting Equip.
 - Freshwater Firefighting Equip.
 - Spill Response Equipment
 - Belowground Pipeline
 - Aboveground Pipeline
 - Secondary Containment Area

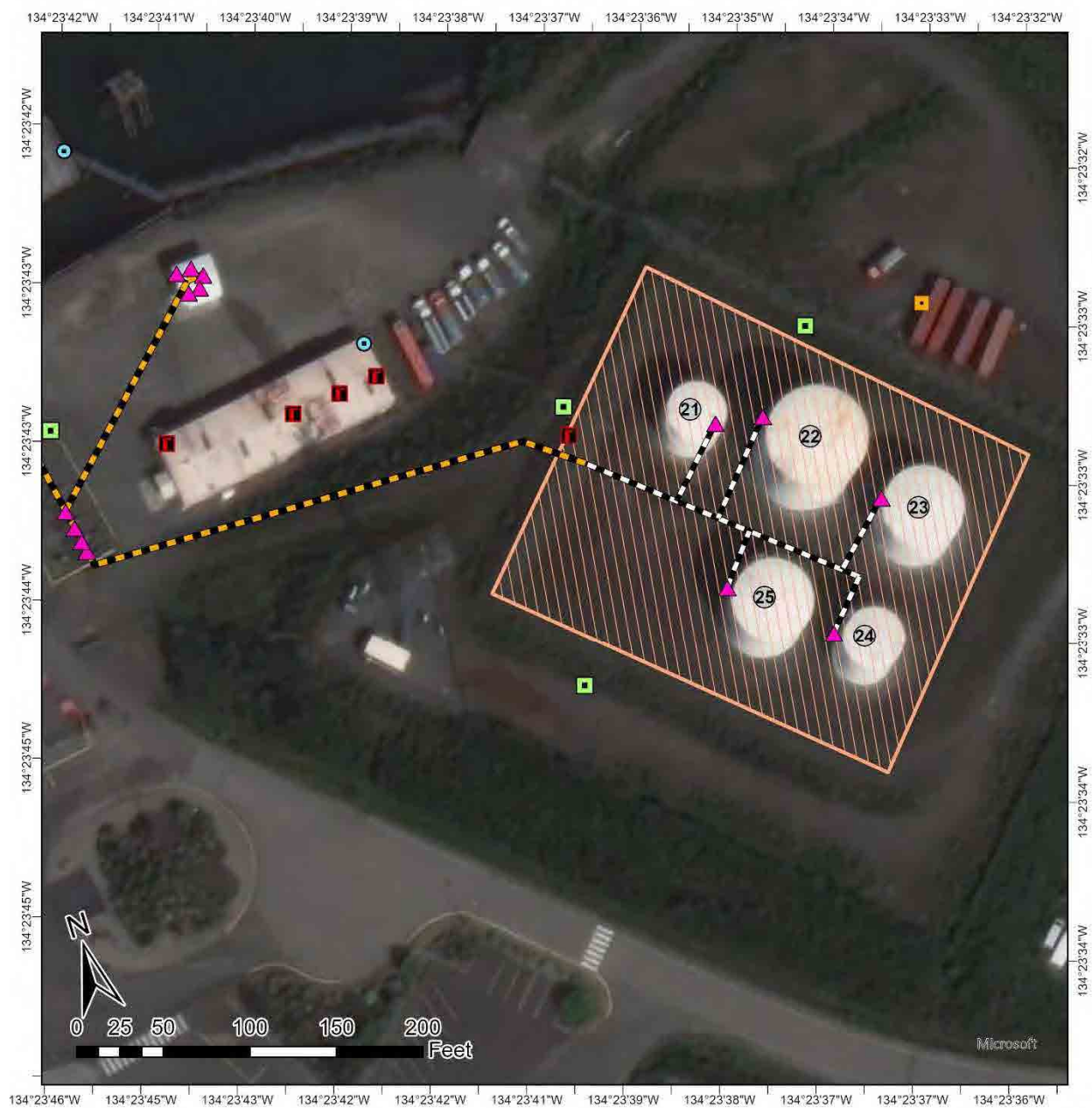


Figure 1.8-5 Juneau Terminal Site Drainage

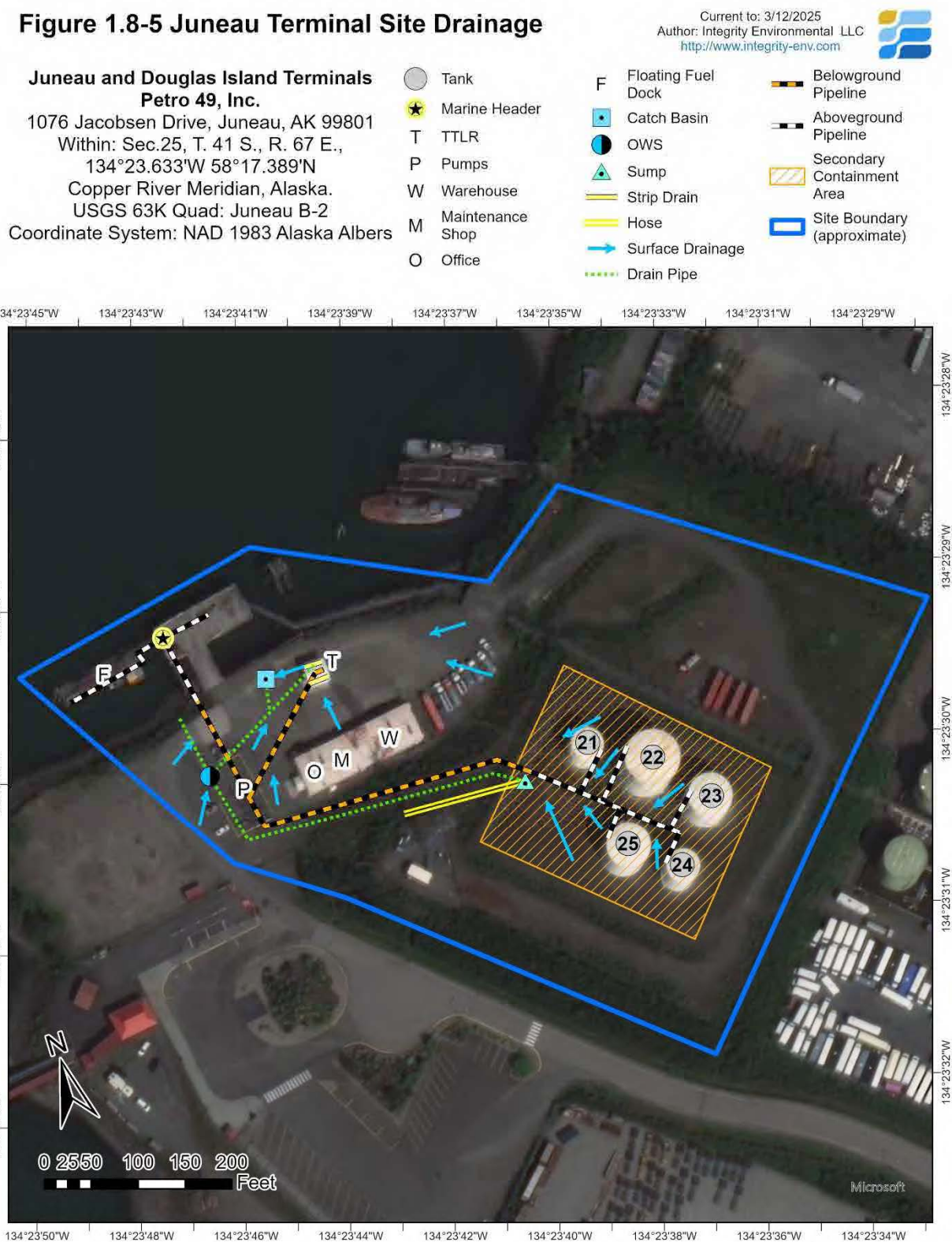


Figure 1.8-6 Juneau Terminal Evacuation Map

Current to: 3/12/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



**Juneau and Douglas Island Terminals
 Petro 49, Inc.**

1076 Jacobsen Drive, Juneau, AK 99801

Within: Sec.25, T. 41 S., R. 67 E.,

134°23.633'W 58°17.389'N

Copper River Meridian, Alaska.

USGS 63K Quad: Juneau B-2

Coordinate System: NAD 1983 Alaska Albers

- + Muster Site
- - - Evacuation Route
- Site Boundary (approximate)

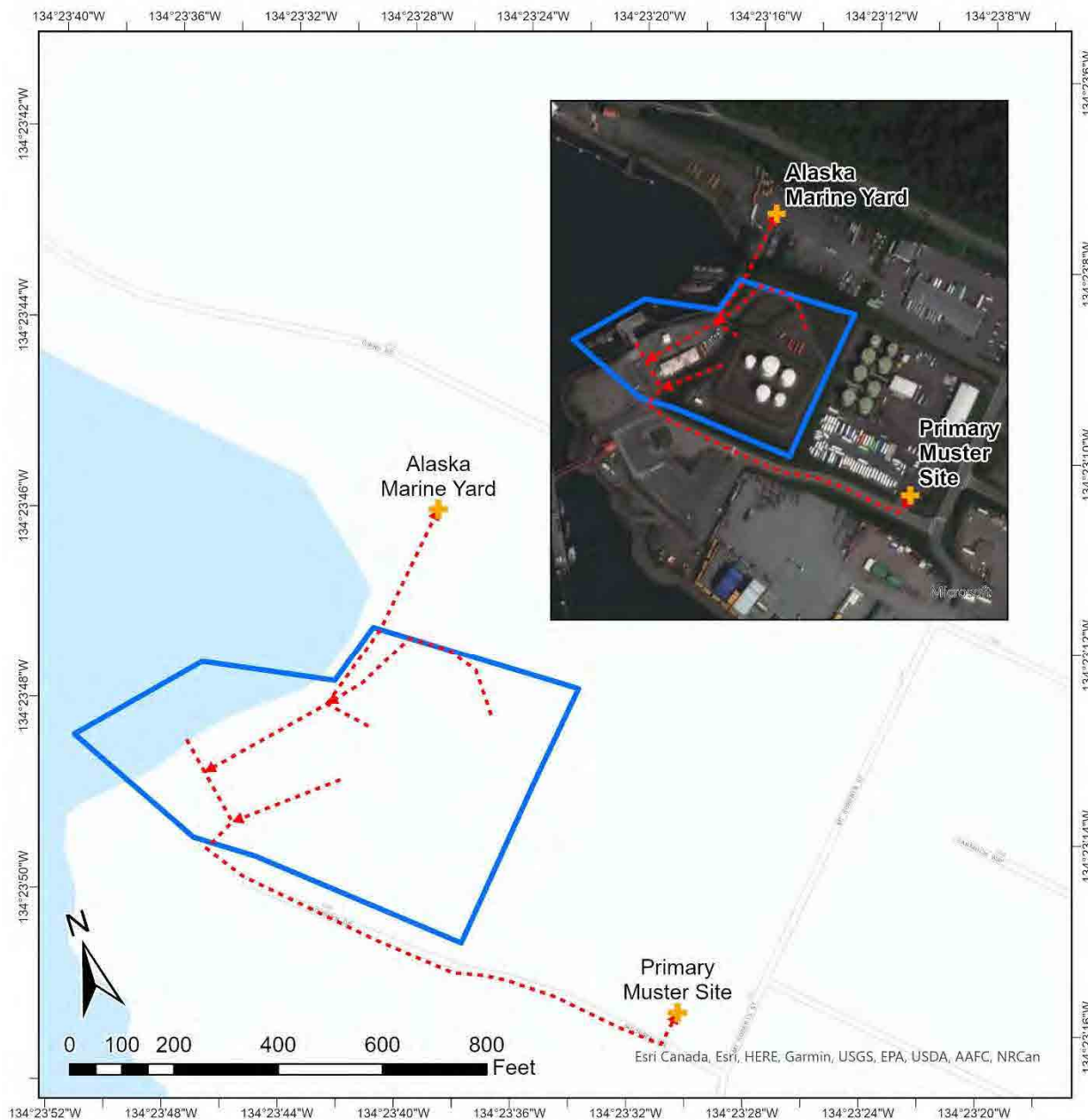


Figure 1.8-7 Secondary Containment Area with Impermeable Liner, Juneau Terminal

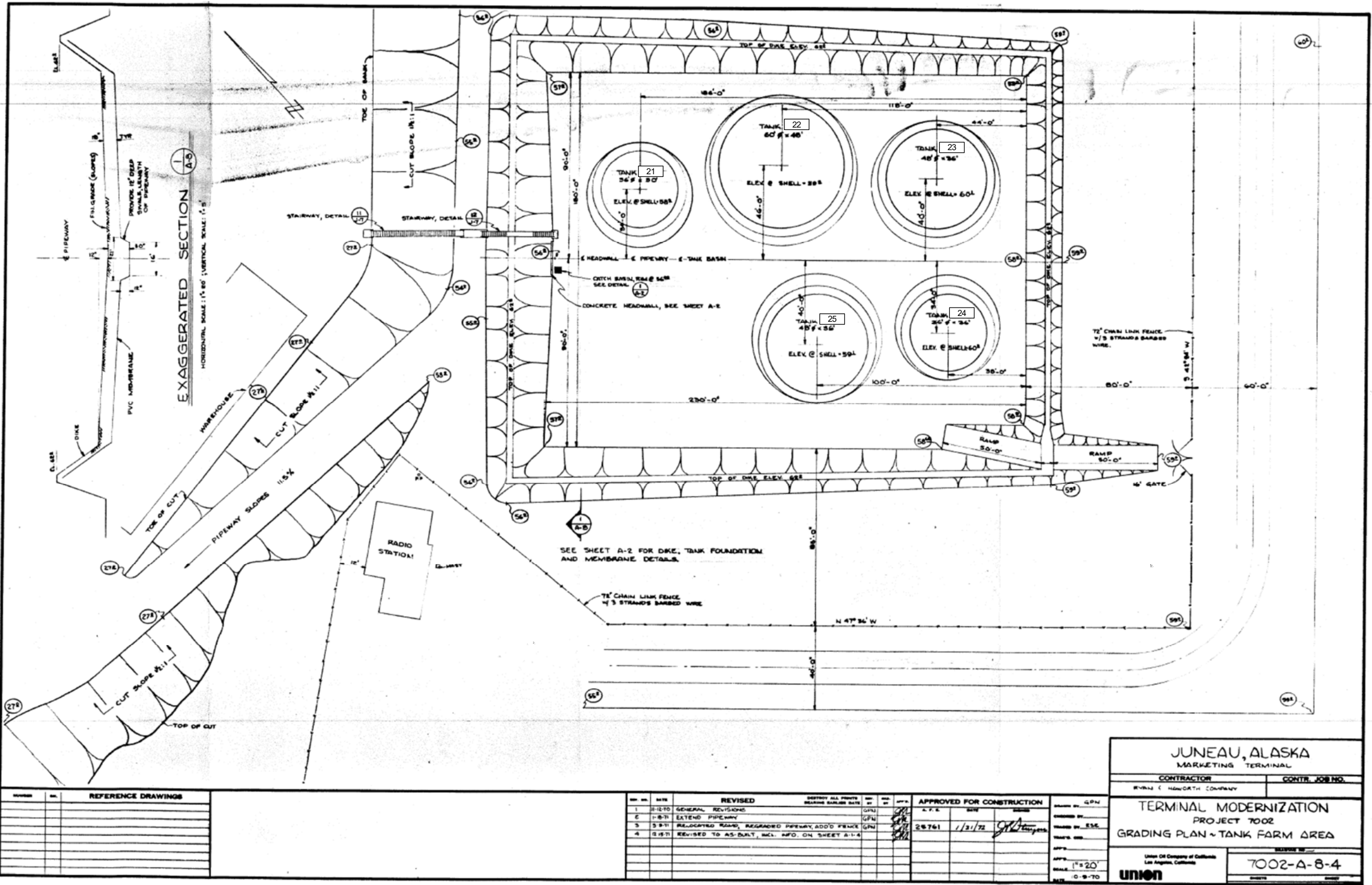


Figure 1.8-8 Tank Foundation and Basin Details, Juneau Terminal

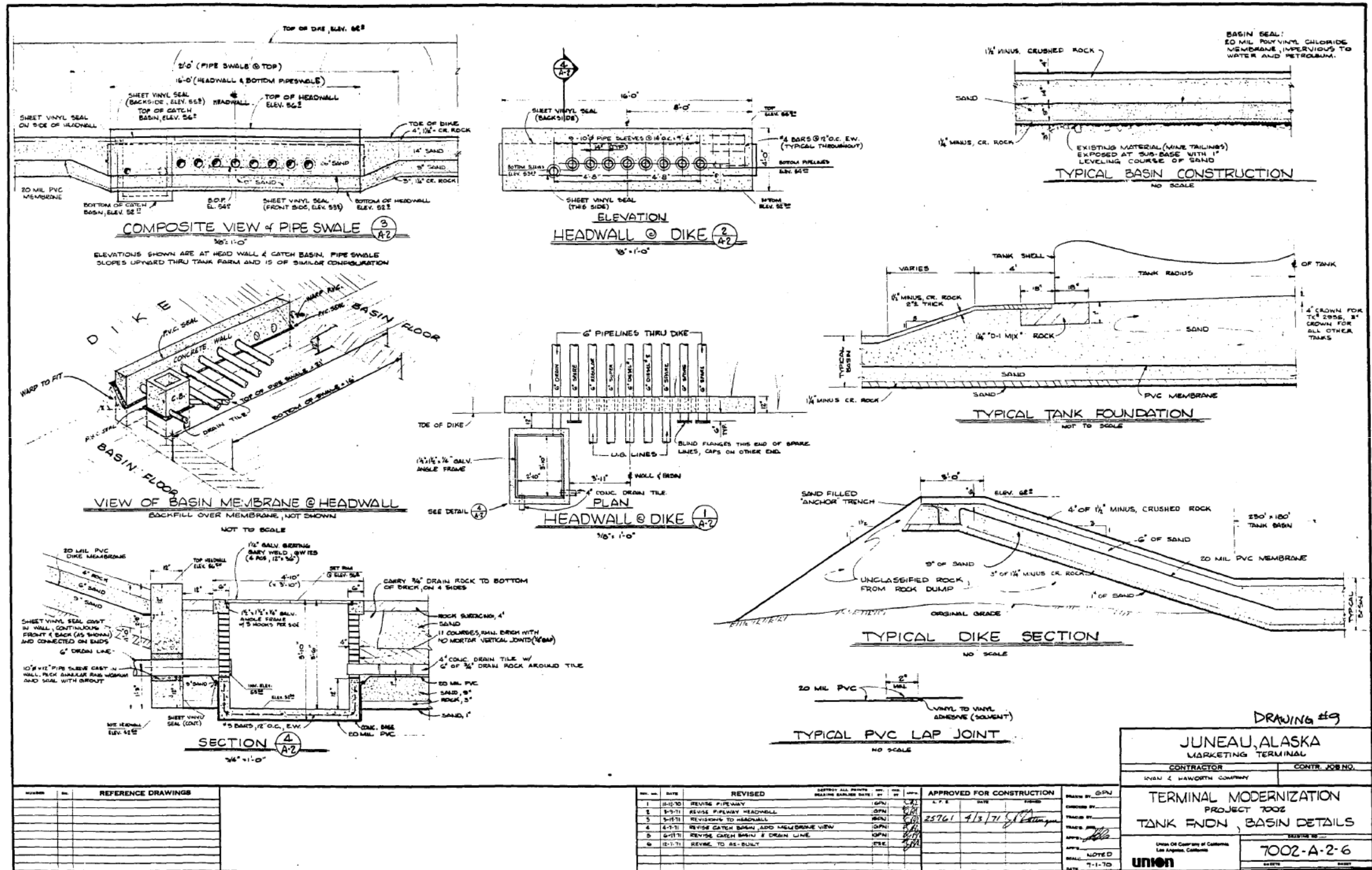


Figure 1.8-9 Marine Header Details, Juneau Terminal

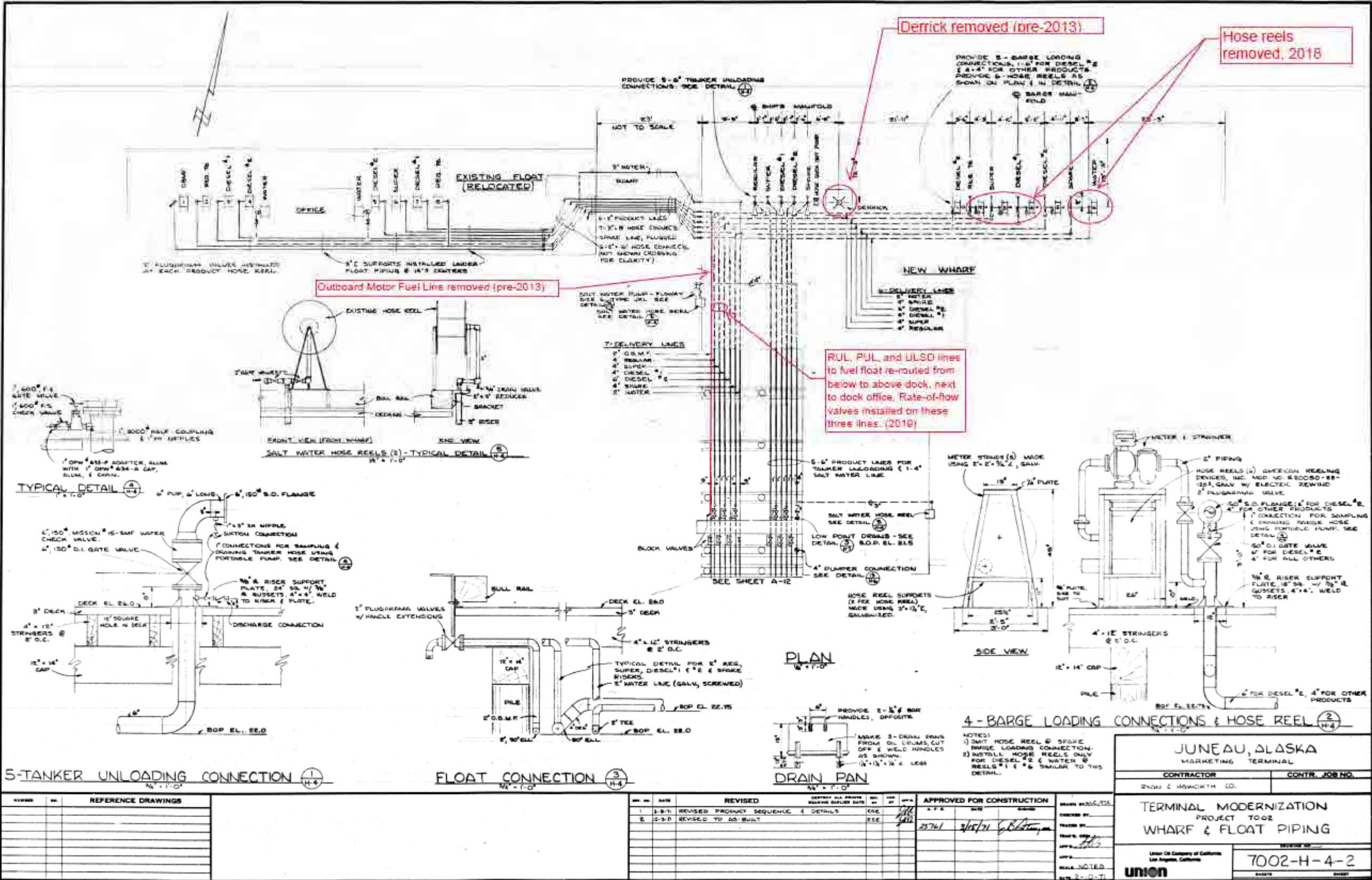


Figure 1.8-10 Oil-Water Separator Detail

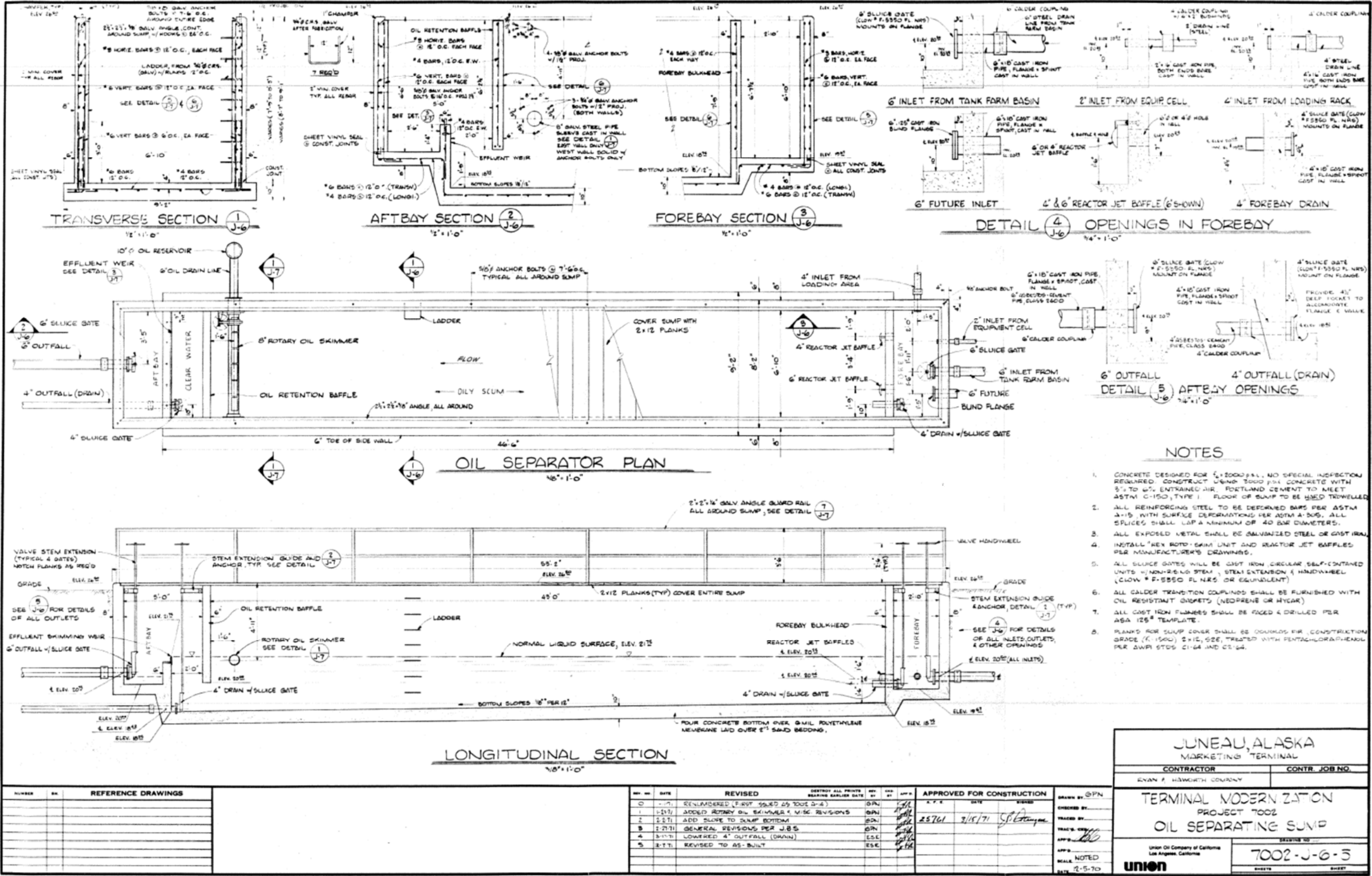
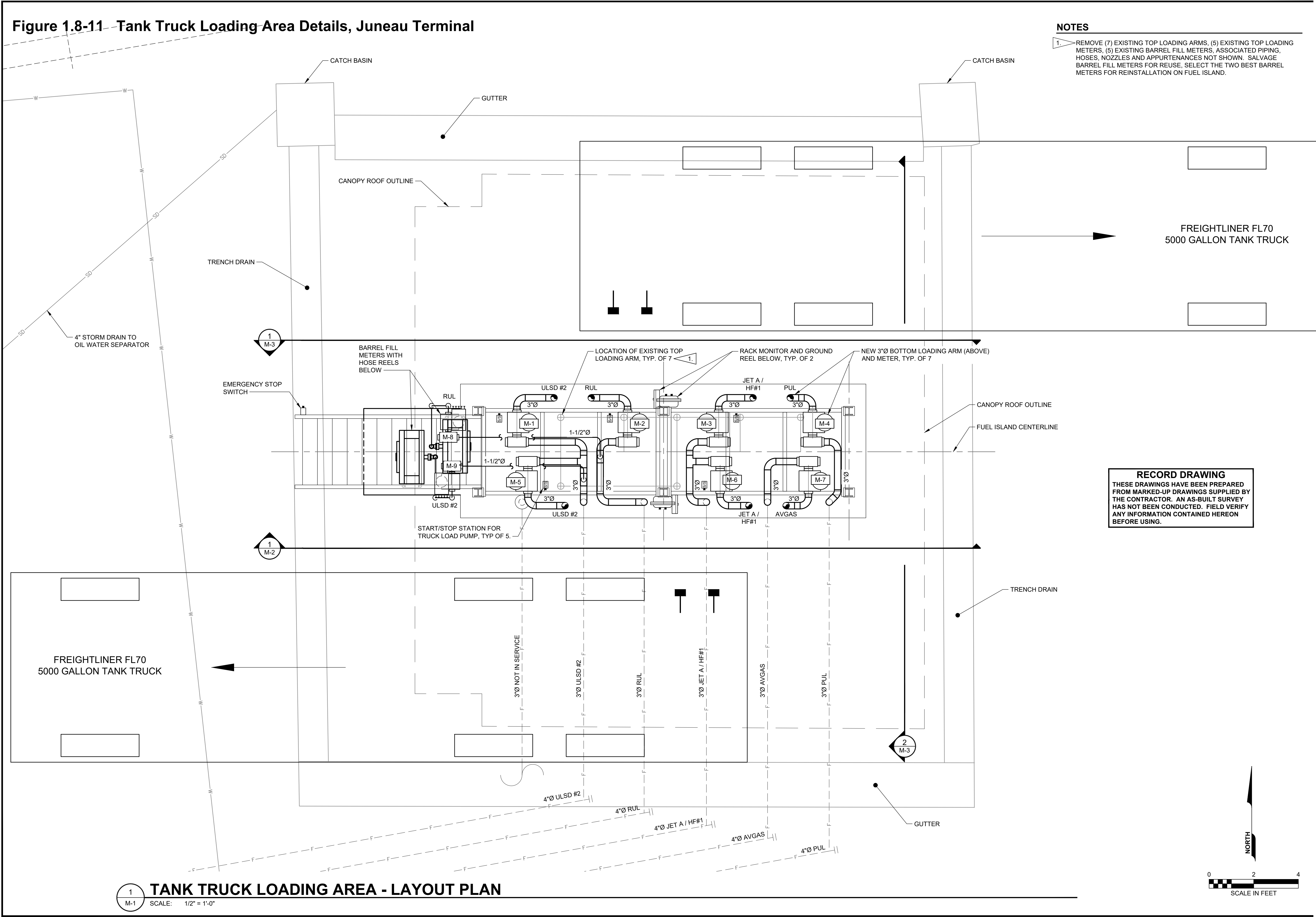


Figure 1.8-11 Tank Truck Loading Area Details, Juneau Terminal



UMIAQ
Design & Municipal Services, LLC
6700 Arctic Spur Road • Anchorage, AK 99518 • (907) 677-8220

CROWLEY FUELS, LLC

TRUCK LOADING AREA UPGRADE

1076 JACOBSEN DRIVE
JUNEAU ALASKA 99801

RECORD DRAWINGS

REV	DATE	DESCRIPTION
1	12/04/2019	RECORD DRAWINGS

DATE: 03/20/2019
DRAWN BY: GMO
CHECKED BY: GMO
JOB NUMBER: 70271.18

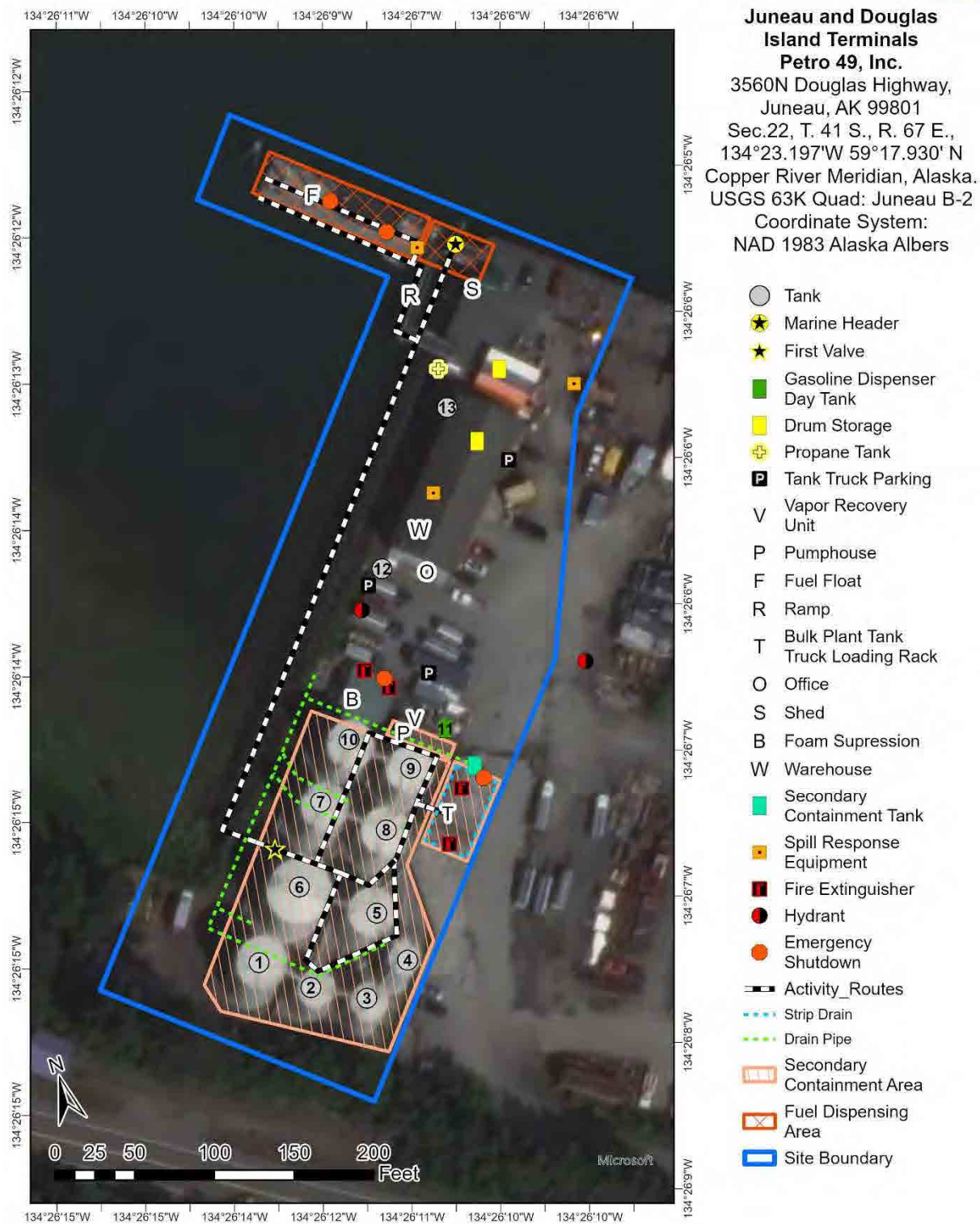
DRAWING TITLE:
TANK TRUCK LOADING AREA - LAYOUT PLAN

M-1

SHEET 4 OF 12

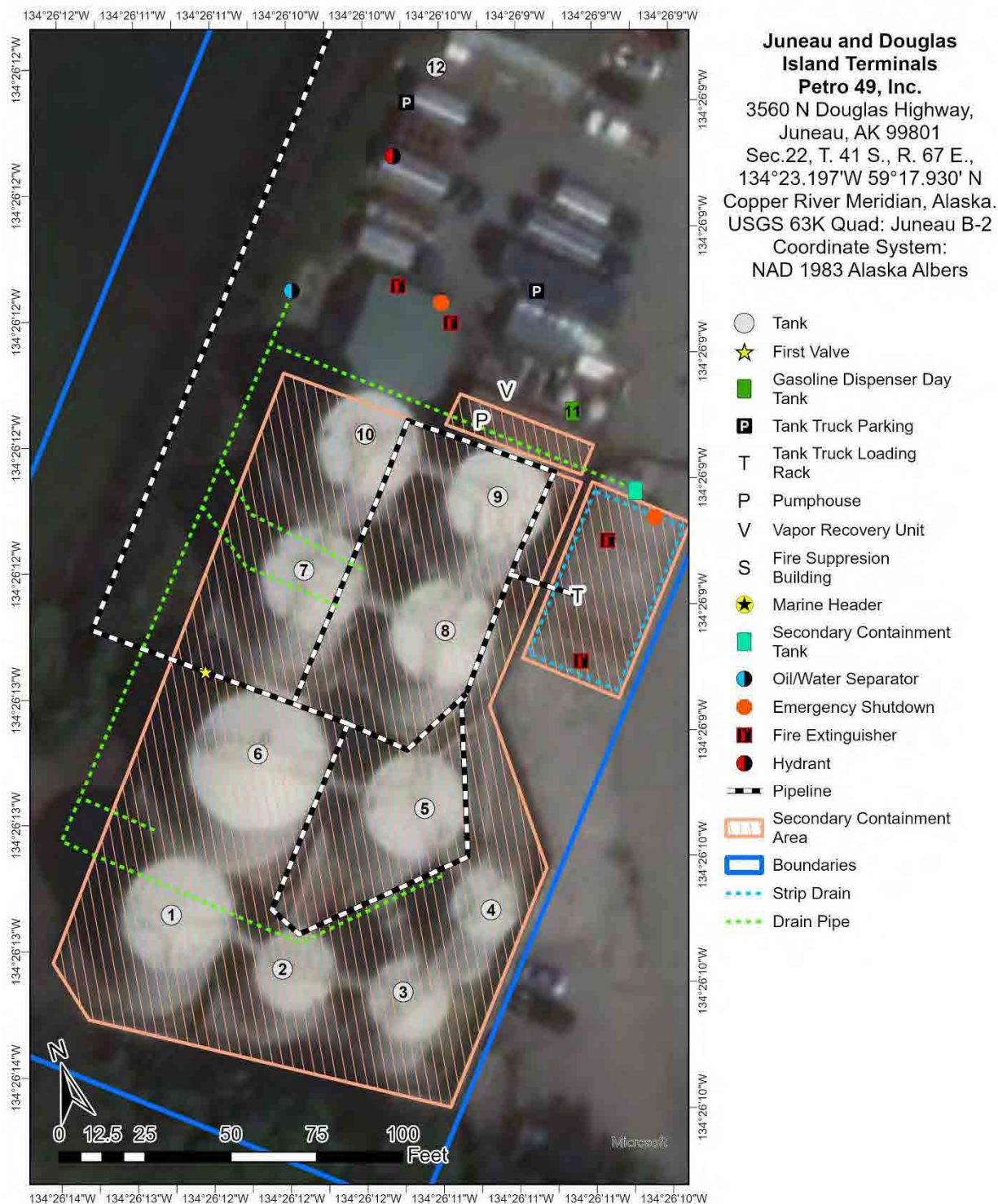
Douglas Island Terminal Figures

Figure 1.8-12 Douglas Island Terminal Site Layout



**Figure 1.8-13 Douglas Island Terminal
Tank Farm Site Map**

Current to: 3/12/2025
Author: Integrity Environmental LLC
<http://www.integrity-env.com>



**Figure 1.8-14 Douglas Island Terminal
Float and Warehouse Site Map**

Current to: 3/12/2025
Author: Integrity Environmental LLC
<http://www.integrity-env.com>



**Juneau and Douglas
Island Terminals
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3560 N Douglas Highway,
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USGS 63K Quad: Juneau B-2
Coordinate System:
NAD 1983 Alaska Albers

- | | | |
|------------------------------|--------------------------|----------------------|
| Fuel Dispenser | Tank Truck Parking | Emergency Shutdown |
| Bulk Plant Fuel Float Office | Propane Tank | Catch Basin |
| Fuel Float | Drum Storage | Pipeline |
| Shed | Marine Header | Fuel Dispensing Area |
| Ramp | Spill Response Equipment | Boundaries |
| Office | Fire Extinguisher | |
| Warehouse and Offices | Spill Response Skiff | |
| | Fire Hydrant | |



Figure 1.8-15 Douglas Island Terminal Site Drainage



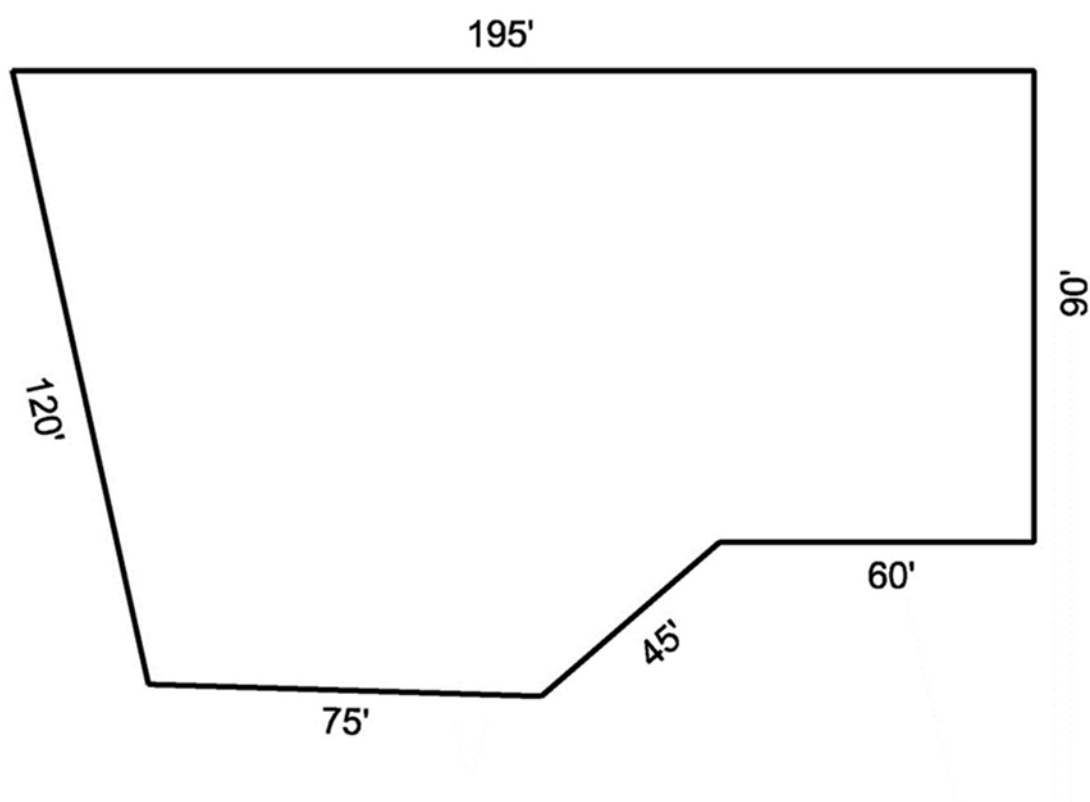
**Figure 1.8-16 Douglas Island Terminal
Site Topography**



Figure 1.8-17 Douglas Island Terminal Evacuation Map

Current to: 3/14/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



Figure 1.8-18 Douglas Island Terminal Dimensions of Secondary Containment

Section 2.0 Prevention Programs

18 AAC 75.450(a)

The prevention program is made up of several parts which together reduce the chance that a spill will occur or minimize its size. The prevention measures and policies include inspection and maintenance programs, training, drug abuse program, medical examinations, and security.

The prevention programs in place are described in this section. The subsections below describe the spill prevention programs for Critical Job training, substance abuse, medical monitoring, security, product transfer, storage tank maintenance, secondary containment, and facility piping.

Section 2.1 Discharge Prevention Programs

18 AAC 75.450(b)(1)

Section 2.1.1 Oil Discharge Prevention Training Program

The training and qualifications for all P49 personnel involved in fuel and bulk petroleum transfers is the responsibility of the Terminal Manager. Each position involved in transfer operations has a job description with specific knowledge level requirements. See Section 3.8 for the facility's comprehensive personnel training program for spill prevention and response. Training records are maintained at the P49 Anchorage office and are available upon request.

Section 2.1.2 Substance Abuse and Medical Monitoring Program

It is company policy to provide a healthy, safe, and secure work environment for employees, citizens of the community, facility visitors, and clients. A substance abuse program is established as well as a voluntary employee health and wellness program.

Substance Abuse: All facility personnel with operations duties are required to participate in the substance abuse program. This program consists of:

- Pre-employment substance screening.
- Random testing for substance abuse conducted by the facility consisting of urine analysis and/or breath analysis. UA for all employees, drivers get breathalyzer.
- Post-accident testing: any driver involved in a US DOT reportable accident must submit to substance screening.
- Testing is performed by a contract laboratory.

Medical Monitoring: P49 will ensure that employees who participate in spill prevention and response duties are free of any medical condition that would impair the employee's ability to do the assigned job. Methods used to determine this include observation by a supervising employee, on the job training, and evaluation during periodic deployment drills.

Section 2.1.3 Security Program

All of P49 Alaska facilities are secured when left unattended. Each tank valve is closed and locked. In addition, all service and header valves are closed when the facility is unattended. The facility has explicit signage and is well-lit and enclosed with a security fence.

Due to the proximity of the Douglas Island Terminal Tank Farm to the Trucano Construction yard, there will be no heavy equipment moving around the tank truck loading rack area when it is in use. DOT Type II barricades will be used during product transfer from the barge to prevent any traffic from entering the header area. There will be no fires, welding, cutting, or repair work of any type within the tank farm itself or within 250 feet of the tanks and header area when product is being transferred.

Section 2.2 Discharge History

18 AAC 75.450 (b)(2)

Table 2.2-1 Discharge History

Date	Cause	Product	Size of Spill (gallons)	Corrective Actions Preventive Measures
<i>Juneau Terminal</i>				
14 Jan 2004	Driver discharged nearly 700 gallons of heating oil into a pipe that led into the customer's basement.	Heating Oil	700	A driver discharged nearly 700 gallons of heating oil into a pipe that led into the customer's basement. Fuel was cleaned up, and ADEC issued a no further cleanup action required. New operational requirements to include labeling below-ground fill pipes and stop work requirements initiated. Additional personnel training was performed.
<i>Douglas Island Terminal</i>				
6 Feb 2002	The valve on the loading arm stuck open and overfilled a tank truck at the TTLR.	#1 Diesel	200	The spill was contained in the secondary containment area for the tank truck loading rack. The pump was stopped to arrest the flow. The spilled fuel drained into the oil water separator. The containment area was wiped clean with sorbents. The fuel oil in the separator was pumped out and shipped to Basin Oil in Seattle, Washington, for disposal. The contaminated sorbents were sent to Arrow Refuse for incineration. Conduct regular maintenance and testing of all truck loading valves.

Table 2.2-1 Discharge History

Date	Cause	Product	Size of Spill (gallons)	Corrective Actions Preventive Measures
21 Sep 2004	Vandal cut fuel lines to the marina and then started fire at Auke Bay Marina.	Gasoline and #2 Diesel	1,600	Estimated that 400 gallons burned before fire was extinguished. Cleanup lasted one week, during which about 300 gallons of fuel was recovered. The rest of the fuel evaporated or escaped and dispersed. Multiple methods of disposal were used. Security measures were increased at the marina.
2 Dec 2013	Barge offloading overfill of Tank 8	#2 Diesel	400-500	The spill was contained in the secondary containment area for the Tank Farm. The pump was stopped to arrest the flow. The spilled fuel was pumped into totes. The fuel oil in the secondary containment was pumped out and stored in barrels, ultimately burning in the on-site waste oil burner. High level alarms were repaired; staff trained on correct operational procedures.

Table 2.2-1 Discharge History

Date	Cause	Product	Size of Spill (gallons)	Corrective Actions Preventive Measures
10 Jan 2022	An ISO tote was being transported via forklift to a flatbed truck. The tote fell from the fork to the ground in the parking lot.	Gasoline	100	The ISO tote fell in the parking lot that was covered in ice. Product did not reach the water or dirt. The product was cleaned up with sorbent pads as much as possible. Any ice and snow that had product in it was collected for disposal. Staff trained on correct operational procedures.
3 May 2022	Fuel was being transferred from a barge to a tank within the SCA and the tank was overfilled.	Diesel	1,640	The barge was notified immediately, and the transfer was halted as soon as the spill was discovered. No product escaped the SCA of the Tank Farm.

Section 2.3 Potential Discharge Analysis

18 AAC 75.450(b)(3)

The intent of this section is to identify potential spills and to estimate their size, frequency, cause, duration, and location. Prevention measures to mitigate each potential spill are described.

Source	Aboveground Storage Tank (AST)
Cause of discharge	Overfills, corrosion, or physical damage that ruptures the tank
Size/rate of flow	Size depends on rate of flow and duration – a few gallons up to 500 gallons. Very low one gallon per day up to ruptured shell 20 gallons per minutes.
Frequency	Very low because of regular inspection and maintenance.
Duration	A leak from small holes caused by corrosion in the bottom might endure for weeks or months depending on the flow rate and the time it takes to be visible at the telltales. Ruptures in the shell will be discovered within minutes and could be stopped in minutes to hours, depending on the size.
Location	Tank farm.
Prevention	Inspection and maintenance. Transfer procedures.
Source	Above Ground Pipeline
Cause of discharge	Corrosion, rupture, and flange failure cause leaks in pipelines. Rupture is most likely caused by physical damage. Flange failure is usually caused by gasket failure.
Size/rate of flow	200 gallons; flow depends on size of hole and pressure – estimate 1 to 25 gallons per minute.
Frequency	Very low because of inspection and maintenance.
Duration	Leaks in above ground pipes are easily and quickly detected – duration is estimated to be one hour.
Location	Cargo lines run parallel to the shore along the length of the facility.
Prevention	Inspection and maintenance; emergency pipe clamp repair kits sizes 2, 4, 6, and 8 inch are kept on hand.
Source	Transfer Hose
Cause of discharge	Degradation of the hose over time or physical damage to the hose.
Size/rate of flow	Two to 10 gallons. One to two gallons per minute.
Frequency	Very low frequency.
Duration	Two to five minutes. Because valves are closed when fuel is not being transferred, leaks would only occur during transfers when operating personnel are present and would detect the leak immediately.
Location	At transition points in the pipelines.
Prevention	Inspection, maintenance, and annual pressure testing.

Source	Transfers (TTLR or marine)
Cause of discharge	Transfer spills are most commonly the result of operator error. Infrequently they are caused by equipment failure.
Size/rate of flow	One to 14 gallons. Rate of flow is 25 gallons per minute.
Frequency	The most frequent transfer spills occur when fueling fishing vessels.
Duration	Less than one minute
Location	Fuel docks.
Prevention	Transfer procedures and personnel training are the primary means of preventing transfer spills
Source	Valves
Cause of discharge	Deteriorated seals or flanges.
Size/rate of flow	Normally less than one gallon. Flow rate is one gallon per hour.
Frequency	Very low because of inspections and maintenance.
Duration	Less than one hour.
Location	Tank farm, foam shed, marine headers, TTLR.
Prevention	Inspection and maintenance.
Source	Camlock Connection
Cause of discharge	Faulty camlock connection not properly seated; damaged O-rings.
Size/rate of flow	Estimate 0.25 to one gallon. Flow rate 25 gallons per minute
Frequency	Less than once a year.
Duration	Less than a minute because transfers through camlocks are attended by operators.
Location	Fuel headers and other transfer areas.
Prevention	Transfer procedures and personnel training.

Section 2.4 Conditions That Might Increase Risk of Discharge

18 AAC 75.450(b)(4)

The intent of this section is to identify conditions or operations that might increase the risk of a spill and to describe measures being taken to reduce the risk for each one identified.

Seismic Hazard: Earthquakes are common throughout Alaska, and several have occurred in southeast Alaska since the facility was constructed. No significant earthquake has resulted in any damage at the facility. Juneau is located in the Coastal shear zone near the Eastern Denali fault and Queen Charlotte-Fairweather fault systems (USGS 2015). Earthquakes as large as 7.5 have been observed in this region (UAF 2020). The facilities and facility piping are inspected after any major earthquake to ensure no damage has occurred. See Section 3.1.1 for a description of each tank's foundation.

Flooding: Tsunamis are a risk after an earthquake. Juneau is considered to have a low potential for an offshore tsunami. The facility is in the tsunami inundation zone for tsunamis triggered by submarine landslide (City and Borough of Juneau 2013). Procedures for securing the facility in the event of a tsunami warning, along with evacuation routes, have been established for personnel in the event of a tsunami warning.

Weather: Bad weather can increase the risk of spills by making employees rush to complete jobs or making it hazardous to transfer fuel at the dock. To mitigate against these risks, employees are cautioned during safety meetings about operating in bad weather. They are instructed to slow down and be sure to follow procedures when operating in bad weather. If they think the weather is too severe to operate safely, they have the authority to stop. Any time an employee thinks an operation is not safe for any reason, he knows he should stop. Whenever the weather conditions make it hazardous to transfer fuel at the dock, the delivery will be rescheduled to a time when the weather returns to safe operating conditions. Extreme weather is further discussed in Section 3.4 of this plan.

Avalanches and Landslides: Avalanches are of special concern in Juneau because portions of the city are located directly beneath avalanche paths. The facility is not located in a spill path of an avalanche. Landslides are also a significant hazard in Juneau because of the climate, topography, and high likelihood of earthquakes, which are known triggers of landslides (City and Borough of Juneau 2009). P49 has established procedures for securing the facilities in the event of an emergency. Procedures for securing and evacuating the facilities are listed on a map hanging in the terminal offices.

Marine Casualty: Small boats to large cruise ships navigate the Narrows. Under normal operations this traffic does not pose an additional risk to the facility nor while transferring product. During the operation of the facility and during product transfers, the facility manager, person-in-charge, tankerman, and duty officer on board the tugboat all monitor these activities and will stop operations or transfer if additional risk is eminent.

Act of Vandalism/Sabotage: Spills resulting from sabotage or vandalism are considered unlikely due to facility security measures in place and the facility's implementation of its USCG-approved Facility Security Plan. The facilities are secured when not staffed to minimize acts of vandalism or sabotage.

Equipment/Operator Failure: Failure of equipment is a cause of spills, and old, poorly maintained equipment is more likely to fail than new, well-maintained equipment. P49 initiated an inspection and maintenance program to find and eliminate equipment at risk of failure. This ongoing maintenance program is one of the most important measures being taken to mitigate against spills caused by equipment failure.

An operating factor that would increase the risk of a spill is having unqualified or untrained employees transferring fuel. P49 screens applicants by checking their qualifications before hiring anyone. Once hired, employees are given specific job training. Throughout their tenure, employees attend regular safety meetings and attend periodic refresher training in operations and spill response. Crew motivation and training are the first line of spill prevention.

Ice: Ice is not usually a barrier to spill response in the Gastineau Channel; however, during prolonged cold spells, ice may appear in the vicinity of the terminals. Ice can form from fresh water flowing from local streams and persist for as long as a week. Because containment boom and skimmers will not work in ice, response may have to rely more on sorbent material during periods when ice exists.

Section 2.5 Discharge Detection

18 AAC 75.450(b)(5)

This section provides a description of the existing and proposed means of discharge detection, including facility inspection schedules, discharge detection systems in place, and monitoring systems. If electronic or mechanical instrumentation is employed, detailed specifications, including threshold detection, sensitivities, and limitations of equipment will be provided.

Section 2.5.1 Facility Inspection

18 AAC 75.450(b)(1)

Direct Observation: Oil spills will be primarily detected by direct observation of the event. Whenever oil is being transferred to a vessel, the person in charge of delivery will stand by the point of transfer. He will keep a continuous watch for any sign of a spill.

During bulk fuel deliveries to the facility, a watchman also will be stationed at the tanks. He will be in radio communication with the person in charge of the delivery who will be keeping watch at the delivery point on the dock. If any irregularity occurs, including overflowing a tank, the watchman will notify the person in charge of delivery who will immediately order the discharging vessel to shut down its pumps. Except for overfill alarms, there is no electronic monitoring to detect spills.

Periodic Inspection: P49 personnel have been trained to observe all piping systems and tanks externally to look for obvious leaks or defects in the tanks or piping systems. They visually inspect the facility for evidence of any discharge during daily operations. This inspection is recorded on the daily inspection form. Monthly and annually, the Terminal Manager or his designee perform a more detailed inspection, identifying potential areas of concern (areas at risk for discharge) and record these observations on the monthly and annual inspection forms. All forms are located in Appendix A of this plan.

Inspection training: The Terminal Manager and tank farm operators are designated and trained to observe facility tanks and piping for the monthly inspection requirements of American Petroleum Institute (API) 653 and API 570.

Section 2.5.2 Discharge Detection for New Storage Tanks

New storage tanks will be equipped with leak detection that is designed and installed in accordance with Annex I API 650 as adopted by reference in Alaska regulations 18 AAC 75.065(g)(2).

Section 2.5.3 Discharge Detection for Existing Storage Tanks

18 AAC 75.065(a)(1), (a)(2)

Tanks are inspected as part of the periodic plant inspections. There are daily and monthly inspections. The monthly inspections include API 653 requirements. (see Facility Inspection Checklist, Appendix A of this plan) All tanks are inspected and maintained in accordance with API 653. Inspections are conducted by API authorized inspectors. The inspection intervals are determined by the inspector, but ADEC can reduce the interval for older tanks, riveted tanks, tanks with a history of problems, or after significant earthquakes.

Horizontal tanks are inspected in accordance with the Steel Tank Institute Standard SP001 (Standard for the inspection of Aboveground Storage Tanks).

Except as noted below, all records and documentation of maintenance, repairs, or alterations are kept for the life of the tank and are available to ADEC upon request. Records and documentation of inspections required by Section 6.3.1 of API 653 will be kept for five years and are available to ADEC upon request. The schedule of tank inspections is provided in the table below.

Table 2.5-1 Tank Inspection Schedule

Tank Number	Date Const.	Last Internal	Next Internal	Last External	Next External
Juneau Terminal					
21	1940	2020	2040	2020	2025
22	1940	2020	2037	2020	2025
23	1940	2020	2038	2020	2025
24	1940	2020	2040	2020	2025
25	1940	2020	2038	2020	2025
Douglas Island Terminal					
1	1949	2005	2025	2020	2025
2	1956	2006	2025	2021	2026
3	1956	2006	2026	2021	2026
4	1959	2005	2025	2020	2025
5	1993	2015	2035	2020	2025
6	1982	2006	2026	2021	2026
7	1993	2011	2031	2021	2026
8	1993	2010	2030	2020	2025
9	1993	2022	2042	2022	2027
10	1993	2015	2035	2020	2025

P49 will notify ADEC before making any major repair or alteration to a regulated tank. P49 will also notify ADEC when taking a tank out of service and before returning any tank to service. A field constructed above ground oil storage tank removed from service for more than one year must be cleaned, marked, and secured in accordance with 18 AAC 75.065(o), which requires that the tank be free of oil,

- Marked with the words “out of service” and with the date taken out of service,
- Secured to prevent unauthorized use, and
- Disconnected from the facility piping.

Overfill Prevention

18 AAC 75.065(k)(1) and (3)

Juneau Terminal: Outalarm™ A-100 overfill alarms were installed on each tank in 2012. Each of these portable alarms is equipped with a three-foot long probe and can be placed into the tank at the gauge hatch opening while receiving fuel. An audible (100 decibel) and visual (three high intensity flashing LEDs) alarm is set off if the tip of the probe comes in

contact with any liquid or firm object. When the alarm is installed in the gauge hatch opening, there is sufficient space to use a gauge tape at the same time. A continuous fail-safe battery monitor operates continuously; in the event that the battery output drops below the lower threshold voltage, the alarm will activate and continue until turned off.

While in the low battery mode, the battery test light will flash red. When circumstances arise where any fill level within a tank will come within five feet of being full, an employee with Person-in-Charge qualifications will be at the top of the tank to hand gauge and visually monitor the fuel levels. This person will be in radio communication with the dock-side employee and the barge Person-in-Charge, so that the tank will not be over filled. The tanks are also equipped with Morrison Clock Gauge liquid level indicators.

Douglas Island Terminal: High level alarms provide overfill prevention on all tanks. All the alarms are set to 90 percent capacity, approximately 1 ½ feet below the top of the shell. The alarm system was updated to the OmnTec MTG-FB probe type alarms in October 2022. This is a combination high/low level alarm. Digital gauging is constant and can be read in the office at any time. When triggered it sounds an 85-decibel alarm and strobe light visible in the tank farm. Inside the office, the display console gives an audible alert with information displayed on the screen.

In accordance with 18 AAC 75.065(I), the overfill protection devices are tested before each transfer operation or monthly whichever is less frequent. The testing for the OmnTec MTG-FB is conducted from the control panel by adjusting the ultrasonic transducer detection setting to the liquid level in the tank, which sounds the alarm and confirms proper operation. The detection level is reset following each test. The controller also indicates component malfunction.

Overfill protection is primarily achieved through the OmnTec MTG-FB system. The person in charge can easily monitor a tanks liquid level from the display in the office throughout a transfer. Each tank has a mechanical Shand & Jurs model 9200 auto-gage which personnel on tank watch regularly check during a transfer. As the tank approaches the 90 percent fill level, an employee is stationed at the top of the tank to hand gauge and visually monitor the fuel levels. Reduced loading rates at the end of the transfer also assist in overfill protection.

A portable battery-operated liquid level alarm (Model A-100 Outalarm) is maintained at the Douglas Island Terminal facility. If for any reason one of the permanently installed high-level alarms fails or has to be removed for any reason, the portable alarm will temporarily replace the defective alarm while it is being repaired. Prior to transfers into the tank, the probe is inserted into the tank through the gauging hatch and is mounted on a C clamp mounting bracket. The probe will be set to the same fill height as the permanent alarm for the tank it is installed on.

The probe is adjusted to the desired height and secured by tightening a nut. The alarm is activated when the probe tip is approximately ¼" below the liquid surface (+/- ¼"). The alarm triggers a 101 db horn and flashing lights that are visible to an observer in the tank yard. Response time is instantaneous.

The portable liquid level alarm will be tested prior to use and/or monthly. The test will be documented on the monthly inspection form. The operation of the alarm is tested by letting the probe tip contact a liquid or firm object. The horn will activate, and the alarm lights will flash if the unit is functioning properly. Additionally, the battery test light will glow green indicating the battery is functioning, and it will flash red if the battery needs to be replaced. Should the battery voltage drop below the lower threshold voltage, the unit will go into alarm mode and will remain so until it is turned off. The battery is replaced annually as part of routine maintenance, unless the battery test light is flashing red, then the battery is replaced immediately.

Leak Detection

18 AAC 75.065(i)(4)(A), (j)(4)(A)

Juneau Terminal: In 2000, all tanks received new tank bottoms. Fiber reinforced concrete 3" to 4" thick was poured on the previously lined existing bottoms and new ¼" carbon steel plate was placed on top of the concrete to create a double bottom for each tank. Eight grooves were made in the concrete which extend from the center column outward to inspection ports at the exterior shell for leak detection purposes. These leak detection ports are monitored on a weekly basis with a gas detector.

Douglas Island Terminal: The Douglas Island Terminal was constructed in 1993. The bulk tanks are single bottom, steel plate tanks with solid roofs. Tanks 1-4 and 6 were moved to the site from elsewhere and had new bottoms installed in 1993. Tanks 5, 7, 8, 9, and 10 were built new in 1993.

Tanks 1-4 are on steel reinforced concrete ring wall foundations. An impermeable liner is attached inside the ring wall and covered with sand. The tank bottom is supported on the sand. A leak through the bottom would be contained by the liner inside the ring wall. To permit observation of a leak, a telltale pipe is installed through the ring wall. The telltale pipes are each equipped with a valve. Operators turn the valve during inspection to determine if a leak from the tank bottom has occurred.

Tanks 5-10 are on a 12 to 15-inch steel reinforced impermeable concrete slab supported on piling. The concrete design is high strength which means that it is very dense, and that the permeability is very low. Radial grooves in the slab channel bottom leaks out from under the tanks into the secondary containment where they can be observed. Although the grooves cannot be observed on the visible ring wall surface, they are installed as described underneath the tank.

Cathodic Protection

18 AAC 75.065(i)(3), (j)(3)

Corrosion protection for the external tank bottoms is required if soil conditions warrant. When the Juneau Terminal was rebuilt in 1971, the tanks were reconditioned, relocated and placed on a foundation of sand and rock inside the secondary containment area. Tanks located at the Douglas Island Terminal are on concrete or clean sand. No bulk tanks at the facility are in contact with the soil, so corrosion protection for the external bottoms is not warranted.

Section 2.5.4 Discharge Detection of Facility Piping

18 AAC 75.450(b)(5)

Discharges are detected by visual inspections. All aboveground pipes and valves are visually checked for leaks before and during transfers or at least monthly, whichever is less frequent.

Before transferring fuel in an area not protected by secondary containment, all hoses are checked for wear, cracks, or damage. All camlock fitting seals are checked for damage before connecting. A catchment basin is placed under each connection to catch any leaks when weather conditions allow. After the transfer is started, all hoses and connections are monitored until the transfer is completed.

Hydrostatic Testing

33 CFR 156.170(c)(1)(iii)

33 CFR 156.170(f)(1)

P49 hydrostatically tests cargo piping to the dock and hoses to 1½ times the maximum allowable working pressure (225 psi for cargo piping, 150 psi for flexible hoses) annually in accordance with United States Coast Guard regulations. This testing is recorded and available on-site. Logs of all inspections, tests, and repairs are maintained in the plant records for three years. These records include the results of tests and details of all repairs or maintenance performed.

Cathodic Protection

18 AAC 75.080(f), (g), (h)(1)

Juneau Terminal: All of the piping at the Juneau Terminal, both aboveground and buried, was placed into service in 1971. There is approximately 2,200 feet of buried six-inch line and 1,200 feet of buried four-inch line. All piping is Schedule 40 with valves for control and emergency shutdown. All underground steel piping is placed in a sand bed covering the pipe at least six inches in every direction and is covered with X-TRU-COAT protective coating. Thermofit sleeves and X-TRUTAPE primer was placed on all pipe joints before being double wrapped with X-TRU-TAPE. The wrapping extends at least six inches above grade where the pipe goes above ground or above a concrete slab.

There have been several construction projects at the facility, which involved exposing portions of the buried pipelines. At these times, the lines were inspected for damage and corrosion. In all cases the lines were in perfect condition with the protective coating on the pipelines still appearing in like-new condition.

18 AAC 75.080(h)(1) requires that buried pipelines without cathodic protection be electrically inspected by a corrosion expert at least once every three years. An initial electrical inspection on the buried pipelines was completed in June of 2010, and the initial inspection on the above-ground pipelines was completed in April of 2011. The last electrical inspection was performed in 2017; the next is due in 2020 (Table 2-1). Copies of the inspection reports are on file at the P49 office and can be forwarded to ADEC upon request.

Douglas Island Terminal: There is no buried pipe at the Douglas Island Terminal.

Third Party Inspection

18 AAC 75.080(j)

Piping is maintained and inspected in accordance with the current edition of Piping Inspection Code, Inspection, Repair, Alteration, and Rerating of In-service Piping Systems (API 570). The inspections will be done by an API certified inspector on the identified schedule based on pipe classification. Aboveground pipe will be visually inspected externally for corrosion, cracking, leaks, misalignment, vibration, supports, and insulation. Ultrasonic Thickness (UT) testing for thickness measurements at specific locations will be employed at the discretion of the inspector. Corrosion Under Insulation (CUI) and pressure testing may be conducted where the inspector thinks it is appropriate.

If there is buried piping without cathodic protection, it is electrically inspected at least every three years (not to exceed 39 months between intervals).

All facility pipes and valves are maintained in accordance with the corrosion control program described in this section of this plan. Aboveground pipes are protected from atmospheric corrosion with a coating. Wherever pipes are exposed to vehicular traffic, the pipes are protected from damage.

All piping inspections are maintained for the life of the pipelines.

Table 2.5-2 Pipeline Inspection Schedule

Pipeline Circuit	API 570 Class	Last Inspection	Next Inspection
<i>Juneau Terminal</i>			
Fixed Dock	1	2024	2029
Float Dock	1	2024	2029
Tank Farm	2	2024	2029
TTLR	2	2024	2029
<i>Douglas Island</i>			
Fixed Dock	1	2024	2029
Float Dock	1	2024	2029
Tank Farm	3	2024	2029
TTLR	3	2024	2029

Section 2.5.5 Secondary Containment Areas

18 AAC 75.075(a), (c), (d), (e), (f)

Juneau Terminal: The earthen rock dike secondary containment area (SCA) surrounding the storage tanks was constructed during the facility reconstruction in 1971. The tank farm area was built up using a layer of 1¼" minus crushed rock on top of the graded existing rock. A base layer of at least nine inches of sand was compacted on the rock layer. An impervious layer of 20-mil PVC liner was installed on the base layer of sand, and this covered the entire containment area including up the berms on the side and underneath the tanks. Another layer of sand at least 14 inches thick was laid on top of the PVC liner and the tanks were put into place. Additionally, 1½" minus crushed rock was installed on top of the sand. A block valve is present in the dike, which is normally kept closed to contain material in case of a release.

Details of the SCA and the PVC liner construction can be seen in Figure 1-11 and Figure 1-12 in Section 1.8.

The dimensions of the SCA are 220 feet by 260 feet by 3.5 feet high, resulting in a total capacity of 200,200 cubic feet (1,500,000 gallons), or about 1,280,000 gallons after adjusting for volume occupied by the bulk storage tanks. The total capacity of the SCA is 35,714.3 bbls, which is 21 percent more than the capacity of Tank 22.

Douglas Island Terminal: The Tank Farm SCA is made of concrete and is divided into four sections by intermediate walls. The SCA is constructed of a steel reinforced concrete perimeter wall and floor. Tanks 1 – 4 are on concrete ring walls which enclose sand on a 40 mil Petro Gard X liner. Tanks 5 – 10 are on a 12 to 15-inch steel reinforced concrete pile supported slab. The perimeter wall is 5' 7" high. There is an interior wall 5' 5" high that separates Tanks 2 through 5 from the other six tanks. If the total shell capacity of Tank 6 were to discharge, it would overfill the containment defined by the interior wall by 102 barrels plus the volume of any water standing in the area. Because the interior wall is lower than the perimeter wall, the overflow would drain over the interior wall into the area containing Tanks 2 through 5. Therefore, the total capacity of the SCA is available to hold a discharge from Tank 6. The total capacity of the SCA is 14,094 bbls, which is 36 percent more than the capacity of Tank 6. The calculations of the SCA capacity are given below in Table 2.5-3; see Figure 1.8-16 for a drawing of the SCA dimensions.

Table 2.5-3 Douglas Island Terminal Secondary Containment Area Capacity Calculations

Total Douglas Island Terminal SCA Capacity				
	122 ft.	195 ft.	23,790 ft ²	
Less	60 ft.	32 ft.	-1,920 ft ²	
Less Triangle	32 ft.	32 ft.	-544 ft ²	
Less Triangle	26 ft.	122 ft.	-1,586 ft ²	
		Total SCA	19,740 ft ²	
Less areas of tank bottoms				
Tank Nos.	Diameter (ft.)	Area (ft ²)		
1	32	804.25		
2	24	452.39		
3	24	452.39		
4	20	314.16		
5	30	706.86		
6	40	--		
7	30	706.86		
8	30	706.86		
9	30	706.86		
10	30	706.86		
Total area of tank bottoms less control tank			-5,557.48 ft ²	
Net SCA area			14,182.52 ft ²	
Times wall height		5.58	79,138.48 ft ³	
gallons/ft ³		7.48	591,955.80	SCA capacity (gal)
			14,094.19	SCA capacity (bbl)
			8,952	Tank 6 capacity (bbl)
			5,142.19	SCA capacity less Tank 6 capacity (bbl)
			36%	Reserve Capacity

Tank Truck Loading Rack

18 AAC 75.075(g)

Juneau Terminal: The TTLR is graded to drain into strip drains and catch basins on the north and south ends of the concrete slab. The drains connect to the facility's oil/water separator that has a capacity of approximately 18,000 gallons. This is more than enough capacity to contain the largest single truck compartment filled there which is 4,300 gallons.

Douglas Island Terminal: The TTLR has a concrete pad to collect spilled liquids. The concrete pad is 60 feet by 40 feet and has a perimeter drain with a grating cover. Any product in the perimeter drain flows into a 2,000-gallon tank. The perimeter drain is one foot by one foot by 200 feet (200 ft³) and has a capacity of 1,496 gallons. The total capacity of the drain and the tank is 3,496 gallons. This is more than enough capacity to hold the largest single

truck compartment of 2,500 gallons. The secondary containment is connected to a 2,000-gallon oil-water separator with a fail-safe valve that closes when oil is present to prevent a discharge.

Wheel chocks are used as a barrier to prevent premature movement of the trucks. One tire is chocked prior to fuel transfers at the TTLR.

Containment at Marine Headers

Drips at the marine headers are collected in a permanent drip pan positioned below the headers. Water that accumulates in the marine header SCA is inspected for sheen and odor prior to discharge.

Drainage

18 AAC 75.075(d)

Juneau Terminal: The accumulated rainwater flows to the catch basin at the northwest end of the tank farm SCA. A valve located on the outside of the berm can be opened to allow this water to flow into the facility's oil-water separator (approximately 18,000-gallon capacity). The sumps at both the TTLR and in the yard empty into the oil-water separator for treatment prior to discharge. The rate at which they drain is controlled by a manual valve located in the upper end of the separator. The discharge of drainage water from the oily water separator is controlled by a manually operated positive close gate valve located on the north end of the separator. This valve is closed and locked every evening as part of the end-of-the-day procedure. During periods of heavy rainfall, the SCA can be drained via a 2-inch hose, which empties into the rocks near the office building. This will be done only after it is determined that there is no sheen present on the accumulated rainwater. If oily sheen is observed, the operator will notify the Terminal Manager to determine the source of the sheen and an emergency response may be initiated, if necessary. If oily water is observed the sheen will be removed by using sorbent material prior to discharge to the oily water separator.

Douglas Island Terminal: Rainwater drains out of the tank yard through a series of catch basins into a buried drainpipe. Water from the Tank Farm containment and the TTLR is drained through a 2,000-gallon oil-water separator. The drainpipe has a manually operated valve outside of main dike wall. The valve is normally closed, and the handle is removed and locked when not in use. Discharge from the oil-water separator is controlled by a manual valve that drains to Gastineau Channel.

The water is visually inspected for oil sheen before it is drained. If a sheen exists, it is cleaned up with sorbent pads and noted in the log. No water is drained until all visible sheen has been removed.

All drainage events are recorded on the inspection log, which is kept at the facility for five years (see Plant Inspection Form in Appendix A of this plan). A record is kept of the date and time of the drainage, the estimated water depth in inches before the water is drained, and the time the drainage stopped.

Inspections and Maintenance**18 AAC 75.075(c)**

The secondary containment areas and TTLRs are visually inspected daily and documented on the Plant Inspection Form located in Appendix A of this plan. Any debris, vegetation, excess water, or other things that obstruct the operation of the containment are removed. The inspector looks for any defects, damage, or signs of leaks or spills. Any problems seen are logged on the inspection log. Necessary repairs or cleanup are undertaken to ensure the containment area is maintained clean and free of debris and excess water, and that the system is operating properly. The containment is visually inspected daily to be sure there is no sheen. Any sheen discovered is cleaned up with sorbent pads.

Section 2.6 Waivers and Compliance Schedule**18 AAC 75.450(b)(6)**

This facility has no operations subject to a waiver, alternate compliance schedule, or existing condition of plan approval.

Section 3.0 Supplemental Information

18 AAC 75.451

This section is the location for background information needed to support the plan. It also contains general information about the setting, layout, and operation of the facility.

Section 3.1 Facility Description and Operational Overview

18 AAC 75.451(b)

Juneau Terminal: The Juneau Terminal is a marine oil transfer facility located on the eastern shores of Gastineau Channel in Juneau, Alaska. The main business office is at 1076 Jacobsen Drive. The facility receives and stores refined, non-crude fuel oil products for distribution in the Juneau and surrounding areas by tank truck. The facility also dispenses marine fuel to vessels up to 150 feet in length. The facility receives fuel in bulk from tank barges through a marine header system located on the dock.

The Juneau Terminal consists of:

- Timber pile main dock (100 feet x 40 feet), supporting two cargo headers (one Petro49 and one Delta Western) and a set of two hose reel dispensers;
- Independent timber fuel float (90 feet x 20 feet), supporting seven hose reel dispensers and a small dock office, with access to the main dock via a 30-foot long gangway;
- Warehouse / Main Office Building which includes the facility office, package products warehouse, shop garage, and fuel spill response equipment;
- TTLR with two traffic lanes, seven bulk loading lines, and two hose reels;
- Five bulk fuel storage tanks with a total capacity of 2,484,813 gallons (Table 3.1-1) located within a lined SCA;
- Valve yard containing three product pumps and two filter vessels;
- Associated piping.

Douglas Island Terminal: The Douglas Island Terminal is a marine oil transfer facility located on Gastineau Channel. It is located across the Douglas Bridge, approximately one mile west of the city center of Juneau, Alaska. The main business office is at 3560 North Douglas Highway. The terminal was built in 1993. The plant is constructed on landfill contained by a sheet pile bulkhead protruding into the Gastineau Channel.

The Douglas Island Terminal consists of a tank farm with secondary containment and a vapor recovery unit (VRU), a foam fire suppression building, and associated pumps, valves, and piping. There is also a warehouse building with offices, a tank truck loading rack (TTLR), and a fuel float. The VRU system, installed in 2007, uses a pressure swing adsorption (PSA) with two activated carbon bed vessels, alternating on a time cycle. The PSA recovers vapor from gasoline products loaded at the TTLR by compressing the gases and allowing them to bond with the solid surface carbon bed vessels. The gas vapor is then condensed to a liquid through a pressure reducing regenerating process and returned to the bulk storage tanks (Tanks 2 and 3).

The marine terminal is a 20-foot by 12-foot wood pile supported dock with fuel headers. There are five 4-inch cargo lines and one 6-inch cargo line running between the marine header and the Tank Farm.

The hours of operation at both terminals can vary but in general, are conducted 12 hours per day.

Section 3.1.1 Tank Information

18 AAC 75.451(b)(1) and (b)(2)

Juneau Terminal: The Juneau Terminal consists of five vertical welded steel tanks with a capacity of 2,484,813 gallons. The tanks were constructed to API 650 standards at the time of installation in 1940. The facility was rebuilt in 1971; the tanks were reconditioned, relocated, and placed on a foundation of sand and rock within a bermed secondary containment area underlain by an impermeable liner.

During the summer of 1995, and again during the summer of 2007, the exteriors of all the tanks were coated with a corrosion resistant urethane developed by Wasser chemical. The tanks were cleaned, spot sandblasted, primed, sprayed with three-mil intermediate coat, then three-mil covering of MC-LUSTER topcoat. In June 2010, a Sherwin Williams Tank Clad two-coat liner was applied to the floor and two feet up the sides of tank 24 (previously tank 2956). This same liner was applied to the floor and lower walls of tank 24 (previously tank 2958) in April 2011.

During the summer of 2000, all tanks received new tank bottoms. Fiber reinforced concrete three inches to four inches thick was poured on the previously lined existing bottoms and new ¼-inch carbon steel plate was placed on top of the concrete to create a double bottom for each tank. Eight grooves were made in the concrete that extend from the center column outward to inspection ports at the exterior shell for leak detection purposes. Detailed information for this project is kept at the facility.

Douglas Island Terminal: The Douglas Island Terminal consists of 10 vertical storage tanks with a capacity of 1,987,440 gallons. The tanks are located within a secondary containment area with concrete walls and floor that is underlain by an impermeable liner.

Tanks 1 through 4 are on ring wall foundations and tanks 5 through 10 are on 12 to 15-inch steel reinforced concrete slabs. Tanks 1 through 4 and 6 were constructed prior to 1993 and were moved to their current location. Tanks 5, 7, 8, 9, and 10 are API 650 tanks constructed in 1993. All tanks are designed for 115 mph wind loads and seismic zone 3.

More information about each tank is provided below in Table 3.1-1.

Table 3.1-1 Oil Storage Container Information, Regulated Tanks¹

Tank ID	Diam. (ft.)	Height/Length (ft.)	Volume (gal)	Year Constructed	Construction Standard	Foundation	New Bottom or Liner Date	Product
Juneau Terminal								
21 ²	36	29' 2"	226,309	1940	API 650	Sand over rock		Diesel #1
22 ²	60	47' 10.5"	1,012,961	1940	API 650	Sand over rock		Diesel #2
23 ²	48	35' 9"	486,028	1940	API 650	Sand over rock		Jet A
24 ²	36	35' 8"	273,510	1940	API 650	Sand over rock		Jet A
25 ²	48	35' 9"	486,005	1940	API 650	Sand over rock		Diesel #2
Douglas Island Terminal								
1 ³	32	42	252,168	1949	Unk/API 12A	Conc. ringwall	NB, 1993	UNL
2 ³	24	30	101,514	1956	API 12C	Conc. ringwall	NB, 1993	UNL
3 ³	24	30	101,514	1956	API 12C	Conc. ringwall	NB, 1993	SUP Gas
4 ³	20	42	98,700	1959	API 12C	Conc. ringwall	NB, 1993 Liner, 2019	AvGas
5	30	40	211,512	1993	API 650	Conc. slab		UNL
6 ³	40	40	375,984	1982	AWA D-100	Conc. slab	NB, 1993	UNL
7	30	40	211,512	1993	API 650	Conc. slab		Jet A
8	30	40	211,512	1993	API 650	Conc. slab		ULSD
9	30	40	211,512	1993	API 650	Conc. slab		ULSD
10	30	40	211,512	1993	API 650	Conc. slab		ULSD
Total Regulated Tank Volume			4,472,253					
Total Non-Regulated Tank Volume			1,000					
Total Pipeline Volume			17,203					
Total Facility Capacity			4,490,456					

¹Regulated tanks have a capacity greater than 10,000 gallons.

²When the Juneau Terminal was rebuilt in 1971, the tanks were reconditioned and relocated.

³Gasoline/AvGas tanks have aluminum pan-type pontoon floating roofs

API 653 – American Petroleum Institute, Standard 653

SUP – Supreme

NB – New Bottom

Table 3.1-2 Oil Storage Containers, Non-Regulated Tanks¹

Tank ID	Location	Volume (gal)	Product
11	Douglas Island Terminal Parking lot, south of the warehouse, welded steel	1,000	Gasoline
Total Non- Regulated Tank Volume		1,000	

¹The tanks listed in Table 3.1-2 are not regulated by ADEC but are included in the table for “facility effective storage capacity” in accordance with OPC 92-6. Tanks listed here are between 1,000 gallons and less than or equal to 10,000 gallons.

Section 3.1.2 Type and Amount of Oil

The average daily throughput at the Juneau Terminal is 19,000 gallons. The average daily throughput at the Douglas Island Terminal is 23,948 gallons. The throughput is generally higher during the busy summer season and lower in the winter months.

Section 3.1.3 Pipeline Information

**18 AAC 75.451(b), 18 AAC 75.451(b)(7)
18 AAC 75.080**

Juneau Terminal: Piping, both aboveground and buried, was placed into service in 1971. There is approximately 2,200 feet of buried six-inch line, 1,200 feet of buried four-inch line, 1,000 feet of aboveground six-inch line, and 500 feet of above-ground four-inch pipe at the facility. All piping is Schedule 40 with valves for control and emergency shutdown.

Douglas Island: Cargo and service pipelines run from the marine terminal to the Tank Farm. There are a total of five 4-inch cargo lines and two 6-inch cargo lines running between the marine header and the Tank Farm. The six-inch and four-inch service pipes pass over the containment wall. Outside the wall, these pipes run under the fire service perimeter road in a concrete vault. The vault is covered with steel plate, which can be removed to inspect or repair the pipes.

Wherever pipes are exposed to vehicular traffic, the pipes are protected from damage.

See Section 1.8 for a site map of the facility showing the pipeline layout including locations of valves.

Table 3.1-3 Pipeline Information

Nos.	Size (in)	Length buried (ft)	Length above ground (ft)	Installed	Service to	Volume (bbls)¹
Juneau Terminal						
5	6		2,455 (total of all lines)		Tank Farm	85.9
1	6	0	131		Tank 21	4.6
1	6	0	150		Tank 22	5.2
1	6	0	213		Tank 23	7.4

Table 3.1-3 Pipeline Information

Nos.	Size (in)	Length buried (ft)	Length above ground (ft)	Installed	Service to	Volume (bbls) ¹
1	6	0	158		Tank 24	5.5
1	6	0	235		Tank 25	8.2
1	6		55		Tank Header to supply line	1.9
1	6		469		Barge header to filter	16.4
4	4		1,150 (total of all lines)		Barge header to filter	17.9
5	4		655 (total of all lines)		Tank Rack	10.2
Douglas Island Terminal						
2	6	0	1,000	1993	Dock ²	69.9
5	4	0	2,000	1993	Dock ²	155.4
1	3	0	150	1993	Marina ³	1.3
3	2	0	450	1933	Marina ³	19.8
Total Pipeline Volume						409.6 bbls / 17,203 gallons

¹This is a cumulative volume of all pipelines that share the same specifications at the Juneau Terminal and Douglas Island Terminal.

²The Dock refers to the dock where the marine headers are located at the Douglas Island Terminal.

³The Marina refers to the fuel float at the Douglas Island Terminal.

Buried Pipe

Only the Juneau Terminal has buried piping. All piping at the Douglas Island Terminal is aboveground.

All buried metallic pipe that has cathodic protection is designed, built, operated, and maintained in accordance with the *Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping Systems*, (NACE RP0169-2007). The buried piping at the Juneau Terminal is not cathodically protected. Per 18 AAC 75.080(h)(1), buried piping that is not cathodically protected will be electrically inspected by a corrosion expert at least once every three years. See Section 2.5.4 of this plan for information on the inspection schedule.

New buried metallic pipe will be welded construction only. No clamped or threaded couplings will be used. The newly installed metallic pipe will have protective coating and cathodic protection. The cathodic protection will be designed, built, operated, and maintained in accordance with *Standard Recommended Practice: Control of External Corrosion on*

Underground or Submerged Metallic Piping Systems, (NACE RP0169-2002). The cathodic protection system will be designed by a corrosion expert. Installation of the cathodic protection system will be supervised by a corrosion expert. The cathodic protection system will have accessible test leads to test the effectiveness of the system.

Out of Service Pipes

18 AAC 75.080(o)

Unless completely removed, any facility piping taken out of service for more than one year must be free of oil. The pipe must be labeled with its origin, date taken out of service, and the lettering "OUT OF SERVICE". The pipe must be isolated from the system and secured to prevent its use. The P49 will notify ADEC when piping is removed from service and when the above actions have been taken.

Section 3.1.4 Transfer Procedures

18 AAC 75.451(b)(5)

Section 3.1.4.1 General Transfer Procedures

All appropriate measures to prevent spills or overfilling during a transfer of oil shall be taken, including reduced loading rates at the beginning and the end of a transfer.

A qualified person will be designated to be in charge of every transfer operation. The person will not be allowed to be the person in charge until he has had sufficient training and experience to demonstrate to his supervisor that he has the capabilities to conduct a safe transfer. In addition, the person in charge of any transfer will be trained in how to respond to an oil spill. This training will ensure that the person knows how to follow the emergency action checklist, the reporting and notification requirements, safety procedures, and the proper response actions.

Prior to bulk deliveries, the tank will be manually gauged to ensure the correct volume is transferred into the tank. During bulk fuel deliveries to the plant, a watchman will be stationed in the tank farm. He will be in radio communication with the person in charge of the delivery and the barge tankerman. The duties of the watchman are to monitor all gauges to make sure they are working properly and to watch for leaks or other irregularities in the tank farm. When topping-off a tank, the watchman will be stationed at the tank. Topping-off a tank means filling it to the safe fill height.

The procedure called topping-off involves filling the last one foot to six inches depending on the size of the tank. Large diameter tanks fill more slowly than small diameter tanks. During the topping-off procedure, the watchman will closely monitor the height of product in the tank and inform the person in charge and the tankerman of the progress. When the person in charge, at his discretion, thinks it is necessary he may station the watchman on top of the tank to monitor the topping-off. This decision depends on the size of the tank, the type of level gauges, or any other factors the person in charge deems appropriate. The watchman will notify the person in charge and the tankerman to stop the transfer when the product reaches the safe fill level.

If any irregularity occurs during the transfer, the watchman will notify the person in charge of delivery who will immediately order the discharging vessel to stop the transfer.

The tank barges and the tank truck loading racks have emergency shut-off switches accessible to the operator to shut down transfers in the shortest amount of time. The tanks have electronic high level alarms, or a portable alarm is used with audio and visual signals to warn employees if a tank is being overfilled.

See Appendix A of this plan for the Declaration of Inspection (DOI) form.

Section 3.1.4.2 Fueling Vessels with Nozzles

A vessel requesting fuel is responsible for conducting its own safe fueling operations. If the facility Person-in-Charge is aware that safe procedures are not being followed or that the vessel operator is not supervising the fuel operation on the vessel, the facility Person-in-Charge will stop fueling. The following procedures will be followed.

- Dock personnel will assist the customer in mooring his vessel and will ensure that the engine has been stopped and all safety requirements have been met. Employees will not board the vessel.
- The customer must handle the product on board his boat, whether the delivery is bulk product by hose or packaged products such as barrels, lubricants, etc.
- If the customer refuses to comply with the company's safe fueling procedures or to handle the product on board his boat, the delivery will be declined, and the customer advised that these procedures are mandatory. Unless the customer complies, he will not be served.

Section 3.1.4.3 Cargo Barge Transfer Procedures

The following procedures govern the transfer of oil between the facility and a tank barge.

- Loading and unloading operations must be done only under the direction of a qualified person-in-charge.
- Verify the tank barge has a state approved oil spill response plan and document it on the Contingency Plan Verification Log provided by the Alaska Department of Environmental Conservation.
- All appropriate measures to prevent spills or overfilling during a transfer of oil shall be taken, including reduced loading rates at the beginning and end of a transfer. During the first and last two minutes of a transfer, the transfer rate will be about 25 percent of the normal rate.
- The facility operator in charge will be responsible for keeping unauthorized persons a safe distance from the hoses and the ship's lines.
- When necessary to moor a vessel at a wharf where another vessel is either receiving or discharging petroleum products, the transfer shall be stopped until the arriving vessel is securely moored, except when in the opinion of the ship's officer and facility supervisor no undue hazard exists.
- Before cargo hoses have been connected, the ship's officer and the facility person-in-charge will agree in writing on the quantities of each product to be discharged and the sequence in which the products will be pumped.
- It is the responsibility of the facility person-in-charge to designate the pipeline header to be used for each product; to determine that there is sufficient space in

the tanks to receive the quantities to be discharged; to see that the cargo hoses are properly connected to the correct headers; to see that the products discharged are going into the right tanks; and to see that the tanks are not permitted to fill over their approved capacities.

- Communication between the person-in-charge of the vessel and the person-in-charge of the facility operation will be by marine VHF portable radio. Two-way voice communication between these two will be maintained continuously throughout all phases of the transfer operation and under all conditions. Whenever communications fail, pumping shall be stopped immediately and transfer operations ceased until communication is re-established.
- The ship and wharf will be adequately illuminated to permit safe operations during darkness.
- Examine hoses before using. Damaged hoses must be marked "condemned" and removed from the dock.
- Aboveground pipelines, hoses, and other operating equipment must be inspected before and during transfers.
- The pressure on transfer hoses should not exceed the working pressure stenciled on the hose.
- Smoking, open fires, and the operation of internal combustion engines, either on boats or on shore, must be kept at a safe distance from a boat being fueled with volatile petroleum products.
- To prevent excessive pressure and possible rupture of the hose, upon completion of delivery of cargo to the facility from a vessel, the vessel's valves are to be shut down first before closing the dock header valves.
- Whenever delivering product to a vessel from the marine header, the header valves must be closed first, then the vessel's valves are closed.
- When a transfer operation is complete, drain the hose into the vessel tanks and secure the piping to prevent spillage. Check all valves to be sure they are closed.
- Place drip pans under the hose connections to contain drips when disconnecting the hose. Place blind flanges on the header and the hoses when not in use.

Section 3.1.4.4 Tank Truck Loading Rack Transfer Procedures

Prior to loading a tank truck:

- Chock the wheels and connect the grounding or overfill protection cable between the truck and the rack.
- Visually check the lowermost drain and all outlets for leaks.
- Check all compartments and filter drain sumps for any water or contaminants.
- Verify that the truck has the proper placard for the fuel to be loaded.
- Before loading, verify the volume that can safely be loaded into each compartment
- The fuel loading tube shall be extended to the bottom of the compartment.

During loading:

- Monitor the differential pressure across the tank discharge filters to ensure they are within limits.

- If any leaks are observed, stop the delivery immediately.

Before departing:

- Close all dome covers, disconnect loading hose, and install dust covers on hose couplers.
- Disconnect the bonding cable and any overfill protection cable.
- Visually check lowermost drain and all outlets for leaks and cap all manifolds.
- Remove the wheel chocks.

Section 3.1.4.5 Mobile Fueling Operations

Tank trucks are operated by facility personnel who are trained and experienced in oil transfer operations and spill prevention, containment, and clean up.

- Pre-transfer meeting is held between transferor and receiver.
- Pre-transfer meeting is held with all P49 personnel involved with the transfer.
- Containment set up under staging truck.
- Spill containment equipment on trucks is checked and accounted for.
- Visually inspect the truck prior to each transfer, and prior to departure for evidence of weeps, leak, or malfunctioning valves/equipment.
- Both parties will ensure the volume available in the vessel's tank is greater than the volume of product to be transferred prior to initiating the transfer.
- Radio communication is established.
- Declaration of Inspection (DOI) completed by both parties.
- Fuel sample taken by both parties prior to start.
- Fuel transfer commencement at half speed.
- Fuel flow confirmed.
- Ending fuel sample taken by both parties and fuel transfer completed.
- Stop time recorded and DOI is completed by both parties.

Section 3.1.5 Evacuation Plan

Evacuation of Injured Personnel

When anyone is injured, rescue, aid or evacuation may be necessary. Call 911 for medical assistance and have the person taken to the Bartlett Memorial Hospital. See Table 1.2-2 for local emergency contact information. If local facilities cannot provide adequate care, contact local emergency services (911) to arrange evacuation.

Evacuation of Facility

Evacuation of the facility may be necessary if the safety of personnel is threatened by fire, earthquake, tsunami, terrorist attack or other forms of disaster. The Local Emergency Planning Committee does not presently have an evacuation plan for the greater City and Borough of Juneau and will be coordinating this plan with the Port Security Committee, of which P49 is a member. At such time as the LEPC and Port Security Committee formulate

their Master Plan, the most logical sites will be utilized to move personnel and motorized equipment.

Juneau Terminal: The Juneau Douglas primary evacuation assembly area is south of the Tank Farm at the bend in Mt. Robert's Road. If the primary location is deemed unsafe, the alternate area for assembly is the Alaska Marine Lines Loading Yard located north of the facility.

Douglas Island Terminal: The Douglas Island evacuation assembly area is next door at the Trucano Staging Area, just north of the Juneau-Douglas Bridge.

To initiate evacuation of the facility, the Facility Manager would announce the evacuation to all employees by one or all of the following methods: verbal, VHF radio, telephone (intercom), and cell phones (for personnel who may not be on site when the announcement is made).

To evacuate the facility, all personnel would follow the evacuation routes shown in Figures 1.8-6 and 1.8-17. Employees will assemble and the Facility Manager will be sure all employees are accounted for. Employees will stay at the assembly area until instructed to move elsewhere by the Facility Manager or by local emergency management authorities.

Juneau school district buildings are available for shelter during emergencies (City and Borough of Juneau 2009). Should the emergency require employees to evacuate further away from the facility, an additional evacuation muster site is available at Gastineau Elementary School located farther south of the bulk plant on 3rd Street. If the emergency does not require evacuation of the plant, but personnel need shelter, they will assemble in the office where heat and water are available.

The primary hazard at the facilities is the fuel stored in the Tank Farm. The volume and type of products stored is given in Table 3.1-1. If the fuel spills outside the secondary containment, the direction of flow will be as indicated in Figures 1.8-5 and 1.8-15.

Section 3.2 Receiving Environment

18 AAC 75.451(c)

Section 3.2.1 Potential Routes of Discharge

18 AAC 75.451(c)(1)

Juneau Terminal: A discharge to the land from the facility that escaped the east side of the tank farm SCA or truck rack area would drain from east to northwest across the facility towards Gastineau Channel and could potentially impact the Rock Dump area. A drainage ditch exists to the west of the facility, below the bluff, which would divert fuel towards the north and towards the waterfront. A spill that escaped the SCA to the northwest would spread out in the flat area outside the SCA and could flow downslope along the compacted roadway, which would act as a preferential pathway down to the waterfront yard. Fuel would spread out and absorb in the porous sediment. See Figure 1.8-5 in Section 1.8, for information on the direction of flow of any discharge at the facility.

If the flow and quantity of a discharge from either the tank farm or truck rack areas into the sumps exceeded the capacity of the oil-water separator, the overflow of discharged material would enter the storm drains and proceed directly into Gastineau Channel.

A discharge at the marine loading dock or from the facility that reaches the water would impact the waters of the Gastineau Channel. See Section 1.8, Figure 1.8-1 for the proximity and general configuration of the channel.

Douglas Island Terminal: The Douglas Island Terminal has product transfer headers located at the P49 cargo dock. Depending upon the size of a discharge during a transfer procedure, it would either go into a spill/drip pan that is below the headers through a two-inch pipe into a 1,000-gallon holding tank and/or directly into the water.

The storage tanks and TTLR are located upland on the Gastineau Channel. A discharge from the TTLR would drain into the oil/water separator. A discharge from the storage tanks would be contained in the secondary containment. Manually controlled drainage from the secondary containment goes to the oil/water separator also. If product escaped the containment and oil/water separator, it would drain into the Gastineau Channel.

Figures 1.8-15 display the drainage routes and potential containment sites at the facility.

Section 3.2.2 Estimate of Planning Standard Volume to Reach Open Water

18 AAC 75.451(c)(2) and (3)

The State of Alaska requires that the on-water portion of a spill be estimated. State guidelines require that the volume estimated to reach the water be based on the overall condition of the facility including prevention measures in place that will reduce the size of a potential spill to water. Prevention measures to be considered include shutoff valves, overfill alarms, and secondary containment. The open water portion of a spill must be a reasonable estimate of the volume expected to reach the water under a reasonable marine spill scenario.

The largest tank is Tank 22 located at the Juneau Terminal. The adjusted RPS volume is based upon the volume of the largest tank, less credits applied for its substance abuse program, and impermeable, lined secondary containment (see calculation in Part 5). The

most likely way for fuel to escape the SCA berm and reach the waterway is if a catastrophic tank failure were to occur resulting in a wave of fuel that could potentially flow over the dike. Therefore, the percentage of the RPS volume to reach open water is based upon a portion of the volume of the largest tank escaping the SCA and flowing across the yard and into Gastineau Channel.

Of the RPS volume (288,694 gallons), it is estimated that approximately 100 percent could go over the SCA berm to the NNE (based on the location of the largest tank and side closest to the berm).

Once outside the SCA, that volume would be subject to the following:

- The area immediately outside the SCA will act as ponding/catchment area as it has a berm (approximate height of six to nine inches). The area is relatively flat and consists of very porous and permeable soil (GeoEngineers 1994) with an estimated 30 percent effective porosity. It is estimated that this “tertiary containment area” will contain and absorb approximately 106,817 gallons (37 percent of the RPS) and will act to slow the migration of fuel towards the waterway.
- The remaining 181,877 gallons (63 percent of the RPS) will continue to flow downslope to the north into another tertiary containment area with a dirt berm. This area will contain approximately 36,456 gallons of oil. The roadway to the dock will act as a preferential pathway for the remaining uncontained fuel. The road, road edges, and corners will also act as catchment areas. Upon reaching the lower open yard, fuel will penetrate this substrate and pool as it slowly spreads out and flows across the relatively flat facility yard towards the channel bank. It is estimated that approximately 1,464 gallons will be held by the roadway and yard through pooling and absorption.
- Of the 288,694 gallons escaping the SCA dike, it is estimated that approximately 144,347 gallons (50 percent) penetrates and pools on land, and 144,347 gallons (50 percent) could enter Gastineau Channel.
- Additional earthen berms and lined trenches could also be constructed at several locations to divert and/or contain the flow of fuel before it could reach the water.

Based upon the above considerations it is estimated that approximately 50 percent of the adjusted RPS could reach open water within 72 hours from the time of discharge without containment and control tactics. That would result in an estimated 144,347 gallons reaching open water.

Table 3.2-1 shows the calculated amount of oil to reach the open water based on the receiving environment described above. Sections 2.1 and 1.6 of this plan describe all prevention and response measures that will be taken to prevent a discharge from reaching open water.

Table 3.2-1 Estimation of Oil to Reach Open Water

Receiving Environment	Reduction (gal)	Volume (gal)	Reduction (bbl)	Volume (bbl)
<i>Spill from Tank 22</i>				
Total Capacity of Tank 22		1,012,961		24,118.12
Alcohol and drug testing of key personnel reduction (5%)	-50,648	962,313	-1,205.9	22,912.22
Impermeable SCA with dike capable of holding contents of largest tank reduction (60%)	-577,388	384,925	-13,747.33	9,164.89
Impervious containment area extending under the full area of each storage tank or double bottoms with leak detection (25%)	-96,231	288,694	-2,291.22	6,873.67
Total outside in SCA (RPS)		288,694		6,873.7
Total amount estimated to reach open water (50% of spill oil outside SCA)		144,347		3,436.8

Section 3.2.3 Vulnerability Analysis

The facilities are located along the Gastineau Channel. There are several economically and environmentally sensitive areas located within the calculated planning distance that could be impacted by a large release at the Juneau and Douglas Island Terminals. The calculated planning distance is discussed in Section 3.9.1 of this plan.

The vulnerability analysis addresses the potential effects (i.e., to human health, property, or the environment) of an oil discharge from the facility. Environmentally and economically sensitive areas within the planning distance and the associated vulnerability analysis are discussed in Table 3.2-2.

Table 3.2-2 Vulnerability Analysis

Sensitive Area Type	Identified Area(s) within Planning Distance of Facility¹	Vulnerability Analysis
Water Intakes	The City and Borough of Juneau Last Chance Basin Well #1 is located approximately 0.56 miles east of the Juneau Terminal. The City and Borough of Juneau also have groundwater well locations in the Last Chance Basin approximately 1.7 miles northeast of the Douglas Island Terminal.	A vulnerability analysis was performed on water intakes located within the planning distance of the terminal. It was found that the public water supplies are up gradient from the terminal and would not be impacted by a discharge.
Schools	• Juneau Douglas High School ~3 miles north of the Juneau Terminal. • Harborview Elementary School ~ 2.5 miles north of the Juneau Terminal. • Juneau Cooperative Preschool ~ 0.7 miles north of the Douglas Island Terminal • Gastineau Elementary School ~ 1.0 mile south of the Douglas Island Terminal.	The distance from the terminals would preclude the schools from being directly impacted. However, in the event of an emergency, the schools will be alerted by the fire department.
Medical Facilities	• Southeast Medical Clinic ~ 1.6 miles northeast of the Juneau Terminal. • Coastguard Medical Clinic ~0.5 miles northeast of the Douglas Island Terminal.	The distance from the terminals would preclude the clinics from being directly impacted. There may be increased vehicular traffic on the roadway from emergency responders and/or spill responders.
Residential Areas	There are numerous residential properties surrounding the terminals.	Although there are numerous properties surrounding the terminals, none of them are in the immediate potential spill area. The properties are located uphill to the south, east, and west of the terminal

Table 3.2-2 Vulnerability Analysis

Sensitive Area Type	Identified Area(s) within Planning Distance of Facility ¹	Vulnerability Analysis
		and would not be impacted by a release at the shore level from possible increased vehicular traffic on the roadway from emergency responders and/or spill responders.
Businesses	Juneau Terminal: • Alaska Marine Lines -Lynden Transport – adjacent to property to the southeast. • Gastineau Guiding Company – adjacent to property to the south. Douglas Island Terminal: • Trucano Construction Company – adjacent property to the southeast. • Juneau Blooming Lotus Sangha – adjacent property to the south.	A large release from the facility would require immediate notification to the surrounding property owners to ensure occupants are notified of the release and to safely evacuate if necessary. A large release from the Douglas Island Terminal could limit/prevent access to the Douglas Bridge. It could impact businesses during the immediate control and cleanup activities. This could complicate evacuation procedures. Active spill response activities would continue for approximately 48 hours. All other listed businesses will also be immediately notified by P49, with the assistance of the local fire and police department, if a large spill is discovered to threaten their properties.
Wetlands or Other Sensitive Environments	Wetlands or other sensitive environments including Geographic Response Strategies are described in Sections 3.9.1 and 3.9.3	See Sections 3.9.1 and 3.9.3 for a vulnerability analysis of this area type.

Table 3.2-2 Vulnerability Analysis

Sensitive Area Type	Identified Area(s) within Planning Distance of Facility¹	Vulnerability Analysis
Fish and Wildlife	Fish and wildlife found within the planning distance are discussed in Sections 3.9.1 and 3.9.3	See Sections 3.9.1 and 3.9.3 for a vulnerability analysis of this area type.
Lakes and Streams	Anadromous streams in the area are identified in Section 3.9.3 and Figure 3.9-2.	See Sections 3.9.1 and 3.9.3 for a vulnerability analysis of this area type.
Endangered Flora and Fauna	Endangered flora and fauna, including critical life periods, are discussed in Sections 3.9.1 and 3.9.3	See Sections 3.9.1 and 3.9.3 for a vulnerability analysis of this area type.
Recreational Areas	Recreational areas within the planning distance are discussed in Section 3.9.3.	Juneau is a well-known recreational area for hiking, fishing, beach combing, small boat harbor access, and Eagle Crest Ski Resort. Should fuel escape, it could impact activities along the shoreline where fuel could be blown or dragged by currents and wash ashore. Access to these activities may be disrupted and/or suspended during control and clean-up activities by the local municipality.
Transportation Routes	Juneau Terminal: The terminal is located near Thane Rd that provides access from Juneau due south. Douglas Island Terminal: The Douglas Bridge provides the main transportation route to and from Douglas Island from Juneau. N Douglas Highway provides the main transportation to the west side of Douglas Island.	Increased vehicular traffic on both the highway and bridge from emergency responders and/or spill responders would be expected during the event of a large release. Local fire/police department would be notified immediately to provide assistance where necessary to re-direct traffic away from spill response efforts.

Table 3.2-2 Vulnerability Analysis

Sensitive Area Type	Identified Area(s) within Planning Distance of Facility¹	Vulnerability Analysis
Utilities	Utilities for water, sewer, and power are mostly buried in Juneau.	There is no planned excavation for the response tactics for the worst-case discharge, so there would be no impact to buried utilities. If excavation is required, the appropriate permits would be obtained from the local municipality before beginning any work.
Other areas of economic importance, including terrestrially sensitive environments, aquatic environments, and unique habitats	See Sections 3.9.1 and 3.9.3 for discussion of this sensitive area type.	See Sections 3.9.1 and 3.9.3 for a vulnerability analysis of this area type.

¹The Planning Distance has been calculated to be a 5-mile radius surrounding the facility. See Section 3.9.1 of this plan for a discussion on the Planning Distance.

Section 3.3 Command System

18 AAC 75.451(d)

Organization of the company's response is based on Incident Command System (ICS) principles. The Facility's initial emergency response team is led by the Terminal Manager, who is the initial facility incident commander. For larger, more significant spills, the company corporate officials will assume ICS positions under the unified command approach described in this section.

The key roles, and structures of the incident command system for oil spills are summarized in this plan. For further detailed descriptions, the following resources contain additional information:

- National Response Framework (FEMA)
- U.S. Coast Guard Incident Management Handbook (IMH)
- Southeast ACP, Incident Command System, Section 1450
- National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet (Appendix B of this plan)
- Alaska Incident Management System Guide (AIMS) (see Section 3.11 of this plan)

The Terminal Manager and key corporate officials are thoroughly trained in these principles. All facility employees receive familiarity-type training on ICS, and ICS is used in training and drills/exercises for all facility employees.

Section 3.3.1 Incident Commander and Terminal Emergency Response Team

The Terminal Manager will act as the initial On Scene Commander (OSC). The alternate OSC is the Assistant Terminal Manager. Refer to Section 1.2 of this plan for personnel and contact information for these two positions. The OSC will be able to perform the following duties:

- Activate internal alarms and hazard communication systems to notify all facility personnel;
- Notify all response personnel, as needed;
- Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
- Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Coordinator, and the Location Emergency Planning Committee;
- Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

- Assess and implement prompt removal actions to contain and remove the substance released;
- Coordinate rescue and response actions as previously arranged with all response personnel;
- Use authority to immediately access company funding to initiate cleanup activities; and
- Direct cleanup activities until properly relieved of this responsibility.

Juneau Emergency Response Team: For minor spills and initial response actions, the facility will use its “terminal emergency response team” (TERT). This team is formed by eight full-time facility employees working at the terminal (If employees are off the terminal at the time of an incident, they will be quickly recalled to the facility in the event of a spill.). This team is prepared to react to the appropriate level of any incident with their focus on spill detection, notification of involved parties, stopping the source of a spill, initiating safety actions, and taking immediate action to mitigate the effects of a spill. Team employees are trained annually in HAZWOPER and spill response tactics and strategies.

Facility personnel assigned to the TERT are listed in Section 1.2, Table 1.2-3, of this plan. The names and detailed contact information for the people assigned to ICS roles in the command system is maintained as a separate document at the facility. This document is kept up to date and provided to ADEC on a quarterly basis when it is revised.

Section 3.3.2 Incident Command Posts

In the event of an oil spill, an ICS will be established by P49 for management of the spill.

For any size spill, the forward incident command post will be established at the Juneau Terminal or Douglas Island Terminal office. These locations have telephones and radio communication capabilities (See Section 1.4) and will be utilized to provide operations leadership, supervision, and support.

In a large spill, an alternate command post may also be established at the P49 office in Anchorage, Alaska.

Section 3.3.3 Incident Command System (ICS) Management Structure

Figure 3.3-1 depicts the ICS structure that will be established and utilized by P49. in a large spill event. It must be noted that the ICS structure is flexible, allowing for expansion, contraction, or modification as warranted and desired.

Precise names, titles, and contact information for each of the ICS roles are provided to ADEC in a separate document. This list is kept up to date and revisions are provided to ADEC on a quarterly basis in accordance with 18 AAC 75.451(d).

The ICS Team is expected to maintain applicable training, please refer to Section 3.8 and Appendix B of this plan for further details on ICS training for P49 personnel.

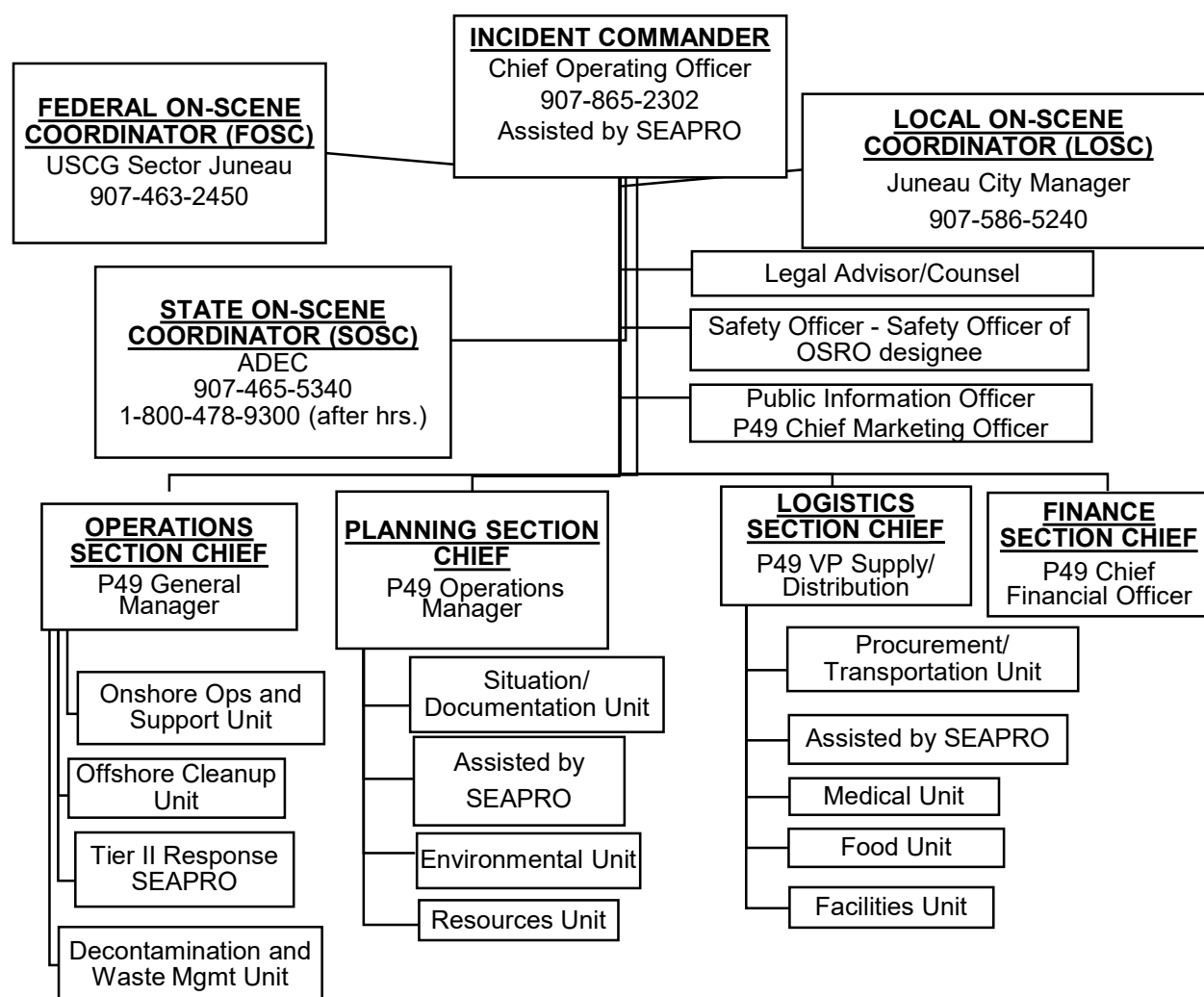


Figure 3.3-1 Initial Incident Command System Structure for P49

Section 3.3.4 ICS Positions and Duties

For personnel assigned to major ICS positions, please refer to Section 1.2 of this plan. In addition to P49 staff, SEAPRO has staff and contracted personnel who can fill ICS positions as required. Descriptions for each ICS position in the ICS chart are presented in Appendix B of this plan.

Section 3.3.5 Incident Action Plans

Incident Action Plans (IAPs) consist of standardized forms that assist in the development and publishing of response plans for a specific operational period. The IAP is completed for larger complex spills that require multiple teams, multiple shifts, and that will continue past one operational period (more than 24 hours). Different parts of the IAP are completed by different sections, but the overall development of the IAP is coordinated by the Planning Section Chief. The IAP serves as a checklist to ensure that proper considerations have been in the development of the plan for the next operational period, and also as a tool to document the plan, environmental conditions, and response activities.

It is extremely important for the ICS team to ensure that their first priority is to ensure safety of the responders and public, then to focus on the support of the operational team. The development of the IAP is a lesser priority to these tasks.

The forms for the Incident Action Plan can be found in Appendix B of this plan.

Section 3.4 Realistic Response Operating Limits

18 AAC 75.451(e)

This section describes the realistic maximum response operating limitations that could be encountered at the facility, along with response strategies within those limitations to reduce environmental consequences.

If environmental conditions are severe, placing fueling personnel, vessels, tank trucks, and visitors/customers at risk, fueling operations will cease until conditions improve. The Terminal Manager is responsible for making such decisions based on experience and understanding of such conditions described in this section.

Prevention Action Measures: Only the most experienced facility persons-in-charge will oversee transfer operations in situations where environmental conditions are severe. Examples of specific prevention actions are:

Modified DOI – Identifying steps to prevent a spill during harsh environmental conditions are addressed in the Declaration of Inspection between the barge and facility persons-in-charge. This may include such steps as:

- Delaying transfer operations until environmental conditions improve to safely transfer.
- Stopping transfer operations if environmental conditions deteriorate considerably and make operations dangerous for barge and facility personnel.
- Increasing the number of personnel watching connections of transfer lines and mooring arrangement of the barge.

Marine Fuel Dock Operations – As a rule-of-thumb, fueling operations for customer vessels at the Marine Fuel Dock will not take place, (or cease if already started) for elevated winds, high seas, or other conditions that would affect safe fueling, at the discretion of the Terminal Manager.

Marine transfers are conducted only when the persons-in-charge of facility and vessel determine environmental conditions will not jeopardize safe, spill-free operations. If the weather is severe enough to place fueling personnel at risk, operations will cease until the weather improves. Such weather conditions may include wind over 40 knots, chop over four feet, and poor visibility due to snow, darkness, etc. Local estimates are that such conditions can exist less than 10 percent of the time depending on season.

Weather: Weather conditions vary considerably throughout the year in Juneau. Juneau is within the area of maritime influences that prevail over southeast Alaska. It is also in the path of most Gulf of Alaska storms (NOAA 2024).

Temperature – Juneau has an average maximum temperature of 60°F and an average low temperature of 25°F. The warmest temperatures typically occur in July, and the coolest occur in January. Extreme temperatures range from 90°F in July and -22°F in February. (NOAA 2025b).

Precipitation – The average annual precipitation in Juneau is 33 inches. The wettest month is October where an average of eight inches of rain falls, and the driest month is April with an

average rainfall of three inches. Juneau receives an average of 87 inches of snow per year (NOAA 2025b).

Wind Speed – Southeast gales may occur in the Juneau area during any season but are more common in the winter. These winds are usually accompanied by rain. Periods of severe cold are usually caused by cold air winds from the northwest and generally have a short duration. During these cold periods, gusty and strong winds may occur (NOAA 2024).

Visibility – Fog may occur at any time but is more common in the winter; it reaches a maximum in January. The least fog is observed from April to July, with the minimum being in May (NOAA 2024).

Sea States, Tides, Currents: The Gastineau Channel, directly in front of the Terminal, is quite shallow and deepens to 17 fathoms at mid-channel. The Channel is approximately 1,000 feet wide by the facility. Currents in the Channel are dominated by the tides. Flood tide currents flow northwest up the Channel, while ebb currents flow southeast out of the Channel. Tidal currents average about two knots at mid-channel and are weaker near the shore. The current flows along the shoreline, going around the harbor in a counterclockwise direction on the flood and clockwise on the ebb tide. Tides ranges from a 22-foot spring high to a four-foot low for a total range of 26 feet. The neap range is about 17 feet (NOAA 2024).

Gastineau Channel is uniformly wide along its length from its southern mouth at Point Salisbury to the Juneau-Douglas Bridge. The channel is narrowed at the Rock Dump site by the distribution of the mine waste rock. The near shore bathymetry of the Channel on both the Douglas Inland and Thane Road sides is fairly uniform, with near shore depths increasing fairly rapidly at slopes of up to 4:1. At a depth of 80 to 90 feet, the underwater slope ends, and the bottom is relatively flat at that depth for approximately 3,000 feet until it rises to the opposite shore. The area adjacent to the Rock Dump area has more shallow areas and shoaling, as a result of current induced migration of the finer mine tailing materials, and periodic mass slippage of the edge of the waste rock material onto the mud flats. This has resulted in an approximately 500-foot shelf of only a few feet in depth at Mean Low-Low Water (MLLW) along the south face of the area (Middleton et al. 1994).

At the Juneau-Douglas Bridge, the channel narrows and water flow is constricted by the shallow tide flats. This results in swift current velocity at that point, as well as confused and inconsistent tidal eddies. Maintenance of any containment boom directly at the bridge site would be difficult during maximum ebb and flood tides, and even if configuration could be maintained, it is likely that portions of the boom could submerge under the strain of the current.

North of the bridge, the Channel widens for a period of about one mile, before becoming extremely narrow and difficult to navigate except at high water, following the Channel marked by the USCG navigational aids. The surrounding mud flats are soft mud and sand, which are dangerous for travel by foot when exposed at low tide. These flats are exposed quickly as water drains off during the middle of the ebb tide cycle, with the potential to leave response vessels grounded.

Ice: Ice is not usually a barrier to spill response in the Gastineau Channel; however, during prolonged cold spells, ice may appear in the vicinity of the Juneau plant. Ice can form from

fresh water flowing from local streams and persist for as long as a week. Because containment boom and skimmers will not work in ice, response may have to rely more on sorbent material during periods when ice exists (NOAA 2024).

Hours of Daylight: Darkness can exacerbate difficult response conditions if severe weather conditions exist at the time of a spill. Darkness has little effect in the summer due to prolonged daylight; however, late fall, winter, and early spring can present response challenges caused by darkness for more than half the day.

Table 3.4-1 Hours of Daylight in Juneau on Solstices and Equinoxes

Season	Hours of Daylight (% of day)
Winter	51
Spring	76
Summer	50
Fall	27

Source: (USNO 2025)

During darkness, ships with sufficient lighting to illuminate the spill area allowing observation of boom would be used if possible. Also, shoreside efforts at lighting will be enhanced. Darkness does not stop deployment of earth moving equipment to contain and control a discharge at the site.

Response Limitations:

Response is estimated to be possible between 85 and 95 percent of the time. Whenever, in the opinion of the Terminal Manager or the person-in-charge, transfers cannot be made safely, operations will be postponed until conditions improve. P49 has no rules limiting operations during specific conditions. The Manager or the person-in-charge has the discretion to decide when it is not safe to transfer oil and when to postpone operations.

It is estimated that some type of response could be mounted almost year-around.

Measures that would be applied in rough weather include:

- Anchoring boom and creating collection sites onshore rather than in the inlet.
- Use extra personnel to monitor containment boom anchor systems.
- Keep extra personnel in a "ready" status for immediate deployment when the sea subsides.
- Maximize shoreside efforts that use earthmoving equipment and near shore boats.

Skimmers/boom – Skimming and boom equipment have varying limitations dependent on the vessel being used and the type of water they will be operating in. In open water, using large vessels with high volume skimmers and large primary storage devices, they can operate in seas up to six feet and in winds up to 30 knots. In protected waters, using vessels of opportunity (fishing vessels), they can operate in seas to three feet and winds up to 25 knots. In calm water, using small fishing vessels, work boats, or skiffs, they can operate in seas of one foot and winds up to 15 knots. And in fast water, including rivers and areas with significant

tidal current, using small vessels or skiffs, they can operate in rivers up to two feet and winds up to 15 knots, or tidal waters up to one foot and winds up to 15 knots (ADEC 2014).

Containment boom will not operate effectively in seas over three feet or winds over 25 knots. These extreme conditions are also unsafe for personnel to operate skiffs on the water. Therefore, traditional response activities would not be conducted when such conditions, or worse, exist.

If spill is moving in excess of one knot, or if the spill site is exposed to potential wave conditions greater than two feet, consider the diversion boom tactic (B-III-8 of the STAR Manual) instead of the containment boom tactic (B-III-2 of the STAR Manual). If seas are under the realistic maximum response operating limits, but not in an optimal state, a second layer of containment boom, outside the primary boom, can break the sea chop and reduce its impact on the primary boom, and it may capture oil that has escaped if the primary boom fails. Sorbent materials can be deployed during times when the sea conditions prevent skimmer operations and hamper boom performance. Response actions would shift to protection of sensitive areas and shoreline cleanup.

Vessels – Sea states can limit the size of vessel capable of responding. P49 maintains a contract with SEAPRO allowing them access to vessels of varying size. The appropriately sized vessel will be utilized for the type of response necessary.

Personnel – Colder air and water temperatures during the winter season will likely make response operations on the water more hazardous and less effective. P49 understands this situation and is prepared for adverse weather. Examples of this preparation include enhanced personal protective equipment (PPE) for working in severe weather conditions, and training for severe weather with modified response strategies.

Logistics – Juneau can be accessed by airplane or vessel. Should there be a large earthquake causing damage to the airport or severe weather, flight service could be disrupted. In either of these situations, spill response equipment could be transferred to Juneau by vessel.

Section 3.5 Logistical Support

18 AAC 75.451(f)

SEAPRO is the Primary Response Action Contractor for Petro 49 in Southeast Alaska. SEAPRO will handle the mobilization and logistical support for its equipment. In order to avoid both duplication and conflict among the plans, and to be sure that members do not misrepresent how SEAPRO will mobilize its equipment and handle logistical support, P49 relies on the SEAPRO Technical Manual. This manual is included by reference as part of this plan and will not be duplicated here.

The Alaska Chaduġ Network (Chaduġ) also provides response services to P49 anywhere in Alaska that its services are requested. Chaduġ may be called if additional support is required even though P49 does not have a contract with Chaduġ covering Southeast Alaska.

Section 3.5.1 Equipment

Staging Areas – Any significant response effort will require dedicated areas for equipment delivery, inventory, repair, and temporary storage. P49 has identified areas to serve as dedicated areas for equipment staging and temporary waste storage areas in the event of an emergency.

Juneau Terminal: The cruise ship parking lot is a potential staging area. Additional potential staging areas in the event of a release to water include the facility boat launch, the facility dock, Sheep Creek, Government (NOAA) Dock, Sandy Beach Recreation Area, Douglas Small Boat Harbor, Douglas Island Terminal dock, Alaska Marine Lines Yard, Harris Harbor, and the Aurora Boat Harbor.

Douglas Island Terminal: The parking lot is available for a staging area. Additionally, Trucano Construction Company, Inc., located next door to the P49 Douglas Island Terminal, is available for equipment staging and storing contaminated waste.

Air Service and Landing Sites – Juneau has a large, publicly owned and maintained airport capable of receiving most aircraft. Commercial flights are available daily.

Fueling Sites – Fuel (automotive, marine, and aircraft) is readily available in Juneau.

Maintenance Facilities – Several machine shops and repair firms along the waterfront can provide hull, engine, electrical, and electronic repairs in Juneau.

Boat Ramps – The Juneau Harbormaster will provide access to docks and boat ramps.

Table 3.5-1 Logistical Support Services: Southeast Alaska

Services	Location	Contact
Air Support		
Alaska Airline (passengers)	Anchorage Juneau	800-252-7522 907-789-7378
Alaska Air Cargo	Anchorage	800-225-2752
ACE Air Cargo	Anchorage	907-334-5100

Table 3.5-1 Logistical Support Services: Southeast Alaska

Services	Location	Contact
Lynden Air Cargo	Anchorage	907-243-7248
Alaska Seaplanes	Juneau	907-789-3331
Temsco Helicopters, Inc	Juneau	907-789-9501
Ward Air, Inc.	Juneau	907-789-9150
Telephone Services		
GCI	Anchorage	800-800-4800
Alaska Electric Light & Power	Juneau	907-780-2222
Barge Services		
P49 Barge Services	South Central Alaska	800-478-7586
Shipping Service		
Lynden Transport (Alaska Marine Lines)	Anchorage Juneau	1-888-596-3361 907-586-6600
Waste Disposal		
Alaska Soil Recycling (ASR)	Anchorage	(907) 348-6700
Excavation Contractor		
Gastineau Contractors	Juneau	907-789-7437

Section 3.5.2 Personnel

Lodging – Some commercial lodging facilities are located in Juneau. The Applicable Municipality website (<https://www.traveljuneau.com/places-to-stay/>) has details on commercial lodging availability in the area.

During the summer tourist season, most lodging facilities are booked at capacity and availability will be limited. Some possible alternatives to traditional lodging may be the use of portable work camps/shelters, school gyms, Alaska National Guard armories, etc.

Food – A significant response to a facility oil spill will require significant quantities of food for a short period of time in Juneau, and the associated equipment necessary for proper food handling, storing, preparing, and disposal. These tasks would require food services contract support from the local area as long as the requirements did not exceed local capability.

Clothing – Alaska's environmental conditions during the late-fall-winter-early-spring seasons dictate that response personnel are equipped to operate in the potentially harsh environment. Additional responders arriving to support facility responders must have adequate clothing for the season to begin working immediately. There are local resources for seasonal clothing; however, they would be limited and should not be relied upon exclusively.

Training and Safety Equipment – Personnel involved in oil spill response activities must comply with all applicable worker federal and state health and safety laws and regulations (See the Occupational Safety and Health Administration (OSHA) standards for hazardous waste operations and emergency response found in 29 CFR 1910.120 and 8 AAC 10.010, respectively). Responders must be HAZWOPER-trained with up-to-date certification.

Personal Protective Equipment (PPE) requirements will be determined by the Site Safety Officer. Response personnel should report with the proper PPE.

Communications – Adequate communications equipment along with a well-thought-out communications plan are imperative to a coordinated response. Section 1.4 details local communication capacity. For advanced spill response communications on larger spills, the resources (portable communication centers) of SEAPRO and the State of Alaska would be utilized.

Table 3.5-2 Personnel Mobilization Schedule

Description	Method	Est. Mob. Time
Juneau-based responders	Personal vehicles	Immediate – 2 hours
Ketchikan-based responders	Contracted and Commercial flights	12-24 hours

Section 3.5.3 Transportation

Marine Highway – Equipment can be loaded onto scheduled ferries or contracted vessels for transport to Juneau via the marine highway.

Aircraft – Commercial flights are available to Juneau on a daily basis from Alaska Airlines. Flight availability is affected seasonally by tourist traffic. Contracted flights from Anchorage are available for transporting equipment and personnel through companies such as Lynden Transport. Contact information for these companies is located in Table 3.5-1.

Both fixed wing and helicopters are available locally to provide aerial spill tracking, and/or shuttle personnel between the response site and the staging area if vessel transport is untimely or impossible.

Vessels – Fishing vessels operate in and around the area as well as the nearby communities. Vessel availability will depend on the season and the location of the oil spill. SEAPRO maintains a listing of vessels-of-opportunity and trained personnel (typically fishing vessels and crew) that are available through the proper contractual agreements.

Table 3.5-3 Equipment Mobilization Schedule

Description	Method	Est. Mob. Time
Juneau-based equipment	Response vehicles, skiffs	Immediate – 2 hours
Ketchikan-based equipment	Barge	8 hours
Sitka-based equipment	Small aircraft	6.5 hours
P49 Barge (or similar contracted barge)	Barge	11.3 - 44.4 hours

Section 3.6 Response Equipment

18 AAC 75.451(g)

The Juneau Terminals maintain sufficient discharge, containment, control, cleanup, storage, transfer, lightering, and related response equipment to meet its applicable response planning standard (see Part 5 of this plan) and to protect environmentally sensitive areas and areas of public concern. To have access to equipment sufficient to meet this requirement, the facility relies on a combination of company-owned equipment and contractual arrangements with SEAPRO for equipment and personnel.

The following pages contain lists of equipment inventory at P49 and at SEAPRO's locations. The vessels under P49 control are inspected annually. Other P49 equipment is inventoried annually and requires no other maintenance. The readiness of contractor equipment is the responsibility of that contractor.

Section 3.6.1 Owned Equipment Inventory

18 AAC 75.451(g)(1) and (3) - (7)

The following equipment is maintained at the P49 Juneau Terminal.

Table 3.6-1 Juneau Terminal Response Equipment

Quantity	Description	Location
Containment		
1,000 ft.	Kepner Boom (BHD 81208 RF)	Juneau Warehouse
2	Boom Tow Bridles	Juneau Warehouse
2	Anchor Buoy System	Juneau Warehouse
4	Boom lights	Juneau Warehouse
4-5 gal	Boom/Equipment Cleaner	Juneau Warehouse
1	Boom Repair Kit	Juneau Warehouse
Recovery		
1	Skim-Pak 4200 (EDRC 228 gal/hr) Skimmer System	Juneau Warehouse
2	Yanmar Series L 2S5 2" Diesel Pump (185 gpm)	Juneau Warehouse
4	Suction Hoses (2" x 20')	Juneau Warehouse
4	Discharge Hoses (2" x 50')	Juneau Warehouse
1	Fire/Wash Hose (1-½")	Juneau Warehouse
10 Bales	Bales sorbent pads, 100/bale	Juneau Warehouse
12 Bales	Sorbent Sweeps 18"x100'/bale	Juneau Warehouse
16	Sorbent Boom 8"x10' w/ rope	Juneau Warehouse
3 Rolls	Sorbent Roll 38"x144'/roll	Juneau Warehouse

Table 3.6-1 Juneau Terminal Response Equipment

Quantity	Description	Location
Temporary Storage and Transfer		
1	Homelite Trash Pump 2" M192 intrinsically (192 gpm)	Juneau Warehouse
1	Dimas Transfer Pump (80 gpm)	Juneau Warehouse
1	Diaphragm Pump 2" M30 (30 gpm)	Juneau Warehouse
4	Hand Pumps ¾" (15 gpm)	Juneau Warehouse
3	550-gallon Tanks	Juneau Warehouse
2	1,000-gallon Tanks	Juneau Warehouse
50	Drums close-top (55 gal)	Juneau Warehouse
10	Drums open-top (55 gal)	Juneau Warehouse
2	Overdrums (95 gal)	Juneau Warehouse
4 Rolls	30-gal Disposable Bags 50/roll	Juneau Warehouse
3	Containers (40' Connex)	Juneau Warehouse
Utility Vehicles		
1	Pickup Truck (Chevy ¾ ton)	Juneau Warehouse
1	Pickup Truck with snowplow (GMC 1 ton flatbed)	Juneau Warehouse
2	2,000-gal Tank Truck (delivery & suction)	Juneau Warehouse
2	2,600-gal Tank Truck (delivery & suction)	Juneau Warehouse
2	2,900-gal Tank Truck (delivery & suction)	Juneau Warehouse
1	4,300-gal Tank Truck (suction)	Juneau Warehouse
1	2,790-gal Tank Truck	Juneau Warehouse
1	Flatbed with snowplow	Juneau Warehouse
2	Bobcat Loaders W/ Buckets and Forks (M-160 & M-753)	Juneau Warehouse
Vessels		
1	18' Landing Craft 115 HP	Juneau Warehouse
2	Boat Trailers	Juneau Warehouse
Miscellaneous		
1	VHF Motorola Base Station	Juneau Warehouse
7	VHF Motorola Radios	1 in each truck
2	Portable Maxon Radios (5-watt)	Juneau Warehouse
2	Portable Icon Radios (3-watt)	Juneau Warehouse
6	Goggles	Juneau Warehouse

Table 3.6-1 Juneau Terminal Response Equipment

Quantity	Description	Location
3	Single Filter Respirators	Juneau Warehouse
4	Life Vests	Juneau Warehouse
1	Gas Detector (Industrial Scientific, MX6 iBrid)	Juneau Warehouse
10	First Aid Kit	Juneau Warehouse
16	Fire Extinguishers	Juneau Warehouse
1	Portable Light Stand (Construction Electrical Products, 2,000 watt)	Juneau Warehouse
3	Lantern Flashlights	Juneau Warehouse
3	Shovel	Juneau Warehouse
3	Rake	Juneau Warehouse
3	Pitchfork	Juneau Warehouse
2	Swede Saw	Juneau Warehouse
2	Double Blade Axe	Juneau Warehouse
2	Sledgehammer	Juneau Warehouse
3	Ice Chipper/Pry Bar	Juneau Warehouse
1	Maul	Juneau Warehouse

The following equipment is maintained at the P49 Douglas Island Terminal.

Table 3.6-2 Douglas Island Terminal Response Equipment

Quantity	Description	Location
Containment		
500 ft.	Kepner Sea Curtain BHD 61208 EF (8x12)	Trailer at warehouse
600 ft.	Kepner Sea Curtain BHD 61208 EF (8x12)	On trailer at warehouse
600 ft.	Versa Tech ZOOM BOOM (8x12)	Box on top of container
12	Anchors w/ 200' rope	Response container
6	Anchor buoys w/ 100' rope	Response container
Recovery		
1	Skim-Pak 4300-SH Skimmer (EDRC:1,134 gal/hr) with float Loadstar 2" Marine Diesel Pump	Marina
1	Compressor, 20 CFM @100PSI	Warehouse
200 ft.	Sorbent boom	Response container

Table 3.6-2 Douglas Island Terminal Response Equipment

Quantity	Description	Location
100	Bales sorbent pads, 100/bale	Response container & warehouse
30	rolls sorbent material	Response container & Warehouse
6	Sorbent sweeps	Response container
1	1 ½ inch air driven pump	Response container
1	2-inch 5hp Centrifugal Pump (116 gpm)	Foam Shed
100 ft.	1 ½ inch hose	Foam Shed
Temporary Storage		
5	4,700 gal tank truck	Yard
3	5,300 gal. trailer pups	Yard
Utility Vehicles		
1	One ton flatbed truck	Yard
1	Half ton pick-up	Yard
1	¾ Ton Truck	Yard
Vessels		
1	18 ft. aluminum skiff w/140 HP outboard	Fuel float
1	Boat trailer	Yard
Miscellaneous		
6	Assorted pipe leak-stop sleeves, 2 – 6-inch	Foam Shed

Section 3.6.2 Contracted Equipment Inventory**18 AAC 75.451(g)(1) and (l)**

Following is a list of the major response equipment contracted by P49 through SEAPRO.

Table 3.6-3 SEAPRO-Owned Response Equipment

Quantity	Description	Location
Containment		
200'	Containment boom, Protected Water (inflatable) Boom 8" x 12"	Juneau
1200'	Containment boom, Protected Water (internal foam) Boom 8" x 12"	Juneau
Recovery		
640'	Sorbent boom	Juneau
1	LORI Brush Skimmer HK 2-2.5	Juneau

Table 3.6-3 SEAPRO-Owned Response Equipment

Quantity	Description	Location
1	Crucial 13/24 Disk Skimming System	Juneau
1	LORI Brush Skimmer HK 3-3.5	Juneau
1	Vikoma Komara 12K MK2 Skimmer	Juneau
Temporary Storage		
1	Canflex Open Top Portable Tank	Juneau
1	Vikoma 12.5 bladder	Juneau
1	Vikoma 12.5 bladder	Sitka
1	Can flex “Sea Slug” FCB - 60	Juneau
1	Can flex “Sea Slug”	Ketchikan
Vessels		
1	OSRV	Juneau
1	Oil Response Barge (ORB #9)	Juneau
1	VOO	Juneau
1	21' Work Boat	Juneau
Miscellaneous		
1	Waterproof drone	Juneau
1	Wildlife hazing kit	Juneau

The most current and up to date inventory of SEAPRO equipment is available on their website (see Section 3.11 for a link).

Section 3.6.3 Operational Characteristics and Limitation **18 AAC 75.451(g)(3)**

The manufacturer's rated capacities, limitations, and operational characteristics for each item of oil recovery equipment are described in the equipment tables located in Section 3.6.1 and 3.6.2 of this plan. Further information on all the equipment is available at the referenced website for SEAPRO.

Section 3.6.4 Storage, Maintenance, and Inspection Program **18 AAC 75.451(g)(8)**

P49 performs a regular maintenance and inspection program that includes an in-depth semi-annual inspection of owned spill response equipment. This inspection is performed by the Terminal Manager or his designee. All pumps and motors are started up on a periodic basis, along with checking fluid levels and seal conditions. Maintenance issues are resolved as they are identified.

Equipment contracted through SEAPRO is maintained on a regular basis and inspected annually by SEAPRO.

Section 3.6.5 Time Frame for Delivery

18 AAC 75.451(g)(2)

This section is reserved for describing procedures for bringing equipment outside the region of operation to meet the response planning standard. This plan does not call for bringing in outside equipment to meet the response planning standard. The time frame for delivering equipment to meet the response planning standard is provided in the mobilization table in Section 3.5, Table 3.5-3 Equipment Mobilization Schedule.

Section 3.6.6 Oil Spill Recovery Vessels

18 AAC 75.451(g)(4) & (5)

Vessels used for oil spill recovery are listed in the SEAPRO Technical Manual and the three tables above (Table 3.6-1, 3.6-2, and 3.6-3).

Section 3.6.7 Efficiencies of Spill Response Equipment

18 AAC 75.451(h)

The type and amounts of boom, boom connectors, and anchorage devices are of the appropriate design for response to an oil spill from this facility. See Tables 3.6-1 and 3.6-2 for the type of boom that is available for use during a response to a worst case (response planning standard) scenario.

See Section 1.6.12.1.1 Scenario Recovery Efficiency for a demonstration that the EDRC for all recovery devices is sufficient for the amount of available contingency storage at the facility.

Section 3.7 Contracted Resource Information

18 AAC 75.451(i)

Section 3.7.1 PRAC Information

18 AAC 75.451(i)

P49 is a member of SEAPRO which is an oil spill response contractor. SEAPRO provides oil spill response personnel and equipment at the request and under the direction of member companies. A copy of the statement of contractual terms is provided on the following page. The corporate address and phone numbers are listed below.

Response Contractor:	SEAPRO
Address:	540 Water Steet Suite 201 Ketchikan, Alaska 99901
Phone:	907-225-7002
Toll Free:	1-888-225-7676 (in Alaska)
Fax:	907-247-1117

A listing of response equipment and services related to spill response scenarios are listed in Section 3.6 of this plan. A complete and updated listing of all the response equipment and services available is accessible on their website (see Section 3.11 for a link).

As required by 33 CFR 154.1035(b)(3)(iv)(A)(2), the PRAC has trained personnel capable of sustaining a response operation for the first seven days of a response.

Section 3.7.2 Memorandum of Agreement

18 AAC 75.451(i)

In addition to contracting a PRAC, P49 has signed a memorandum of agreement (MOA) with Trucano Construction Company, who has an available staging area for spill response equipment and/or contaminated waste. The signed MOA is included in this section.

STATEMENT OF CONTRACTUAL TERMS

(PLEASE COMPLETE BOTH SIDES)

AS REQUIRED UNDER AS 46.04.30, AS 46.04.035 and 18 AAC 75.451(i)(1) in fulfillment of a requirement for registration of primary response action contractors and for approval of an Oil Discharge Prevention and Contingency Plan.

PLAN TITLE: Petro 49, Inc. ODPCP-FRP Juneau and Douglas Island Terminals,

PLAN HOLDER: Petro 49, inc.,

This statement is a certification to the Alaska Department of Environmental Conservation summarizing the contract between Petro 49, Inc., the oil discharge prevention and contingency plan holder (hereafter "PLAN HOLDER"), and Southeast Alaska Petroleum Response Organization, Inc., the oil spill primary response action contractor or a holder of an approved oil discharge prevention and contingency plan under contract (hereafter "CONTRACTOR"), executed on _____, and the original of which is located at 2101 E. 63rd Ave., Anchorage, AK 99507, as evidence of the PLAN HOLDER's access to the containment, control and/or cleanup resources required under standards at AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495. The PLAN HOLDER and the CONTRACTOR attest to the Department that the provisions of this written contract clearly obligate the CONTRACTOR to:

- (A) provide the response services and equipment listed for the CONTRACTOR in the contingency plan;
- (B) respond if a discharge occurs;
- (C) notify the PLAN HOLDER immediately if the CONTRACTOR cannot carry out the response actions specified in this contract or the contingency plan;
- (D) give written notice at least 30 days before terminating this contract with the PLAN HOLDER;
- (E) respond to a Department-conducted discharge exercise required of the PLAN HOLDER; and
- (F) continuously maintain in a state of readiness, in accordance with industry standards, the equipment and other spill response resources to be provided by the CONTRACTOR under the contingency plan.

STATEMENT OF CONTRACTUAL TERMS

I hereby certify that, as representative of the PLAN HOLDER, I have the authority to legally bind the PLAN HOLDER in this matter. I am aware that false statements, representations, or certifications may be punishable as civil or criminal violations of law.

David Simmerman 2/27/2025

Signature _____ Date _____

Name: **David Simmerman**

Title: **Environmental Compliance Manager**

FOR: **Petro 49, Inc.**
PLAN HOLDER

I hereby certify that, as representative of the CONTRACTOR, I have the authority to legally bind the CONTRACTOR in this matter. I am aware that false statements, representations, or certifications may be punishable as civil or criminal violations of law.

Dave Ownings 2/27/2025

Signature _____ Date _____

Name: **Dave Ownings**

Title: **General Manager**

FOR: **Southeast Alaska Petroleum Response Organization, Inc.**
CONTRACTOR

MEMORANDUM OF AGREEMENT

Trucano Construction Company Inc. agrees to provide access to the following resources in the event of a large oil spill at the Petro Marine Services Douglas Island Terminal in Juneau, AK:

- Land adjacent to the Petro Marine Services Douglas Island Terminal Facility for use as temporary storage of contaminated waste.
- Equipment and operators to construct a lined temporary storage area.

This memorandum of agreement (MOA) acknowledges that in the event of a large oil spill, these resources will be available to Petro Marine Services (Petro 49, Inc.) and is in effect for five years from the signature date below.

David Simmerman

David Simmerman
Environmental Compliance Manager
Petro 49, Inc.
Date: 5-28-2022

Jeff Trucano

NAME JEFF TRUCANO
TITLE VICE PRES. DEPT
Trucano Construction Company Inc.
Date: 10-7-22

Section 3.8 Training and Exercises

18 AAC 75.451(j)

P49 recognizes that all oil-handling personnel must be trained and kept current in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; and general facility operations.

Objectives

The goal is to provide each employee the training necessary to do his or her job effectively and to respond to anticipated emergencies. The training will be designed to provide the necessary skills and knowledge to perform assigned tasks safely and proficiently. The ultimate aim is to protect the health and welfare of the employees and the public, as well as to make sure that service is provided in a professional and competent manner. The training will qualify employees for the following:

- To operate the transfer and loading equipment properly and to prevent spills.
- To understand the purpose, operation, and limitations of all safety equipment so that spills do not occur.
- To be alert to potential hazards and to respond with minimal risk to personal health and safety.
- To be familiar with spill response operations.
- To know proper notification procedures in the event of a spill.

Section 3.8.1 Training Programs

The Terminal Manager is responsible for ensuring that every employee receives both general and task specific job, safety, health, and environmental training required by federal and state regulations and by this program. Training must be based on the duties and functions to be performed by each person. P49 does not use casual labor nor volunteers for spill response and therefore has no such training program.

The Terminal Manager is responsible for maintaining records of all training provided to employees. These records will include the employee's name, a description of the training received the date of the training, and who conducted the training. These records should be maintained at the operations office for at least five years and should be available for inspection. Copies of these records should also be maintained in the employee's personnel file. Three kinds of training will be given all employees:

- Initial training and employee indoctrination, including prevention training.
- Annual refresher training, including prevention.
- Safety meetings.

Qualifications and Initial Training

The initial training includes four programs:

1. **COMPANY/JOB TRAINING** – This is the training and orientation required of all new employees. It is designed to familiarize the employee with the company policies and procedures. Specific training required to teach each employee his particular job will be included, as well as training in the prevention of oil spills.
2. **ICS – Incident Command System.** This training is required for all management, supervisory and staff personnel who will participate in controlling response to spills.
3. **HAZWOPER – Hazardous Waste Operations and Emergency Response.** This is training required for employees who may discover spills or who will supervise or work on emergency response operations.
4. **SPILL RESPONSE** – This training consists of deployment exercises conducted in addition to the control and containment training included as part of the HAZWOPER training.

Each employee's training is based on the individual employee's regular duties and on the level of involvement the employee will have in spill response activity. In addition to the employee's regular job duties, each employee will have responsibilities for responding to oil spills and other emergencies. These emergency responsibilities fall into the following categories.

FIRST RESPONDER AWARENESS LEVEL – This training is for employees who are likely to witness or discover a spill but would not take any action beyond notifying the proper authorities. They will be trained to recognize and understand the hazards of any substance spilled. They will know what security measures and additional resources are necessary to respond and whom to notify of the emergency. (No specified time requirement - typically 4 hours annually)

HAZARDOUS MATERIAL TECHNICIAN – Technician level training is for employees who provide initial emergency response to spills. Their function will include containment and control of a spill and may involve working at the point of release to plug, patch, or otherwise stop the flow. (24 hours plus 8 hours annual refresher)

INCIDENT COMMANDER – Incident Commanders will take control of the spill site. In addition to the Technician level training, Incident Commanders must be competent to implement the response plan and generally manage the spill response effort.

Oil Transfer Operations

Facility procedures for oil loading and transferring operations are designed to prevent oil spills. The transfer procedures are described in detail in the facility operations manual and summarized in Section 3.1 of this plan. The major positions of the oil transfer team are summarized here:

Person-In-Charge – Training for this advanced leadership position of an oil transfer team requires experienced understanding of fuel handling systems and ways to ensure the team is spill prevention-oriented in their work. The Terminal Manager keeps an updated list of personnel qualified to act as person-in-charge.

Dock Watch – Watches the shore-side fuel header and opens and closes valves, as directed, keeps a constant watch for leaks and/or oil in the water, watches for changes in the tide, wind, and water that may cause disruption of the transfer operation, and stays in constant communication with the barge tankerman, the tank farm, and the designated person-in-charge.

Tank Watch – Opens and closes tank valves as required, monitors fuel levels in tanks being filled/emptied, inspects tanks and piping for any leaks, and stays in constant communication with Dock/Hose Watch and Designated Person-in-Charge.

Tank Farm Operations

All personnel who operate the tank farm and associated transfer piping systems are trained to inspect the secondary containment areas for accumulation of rainwater inside the berms. They are trained to drain the accumulated water from the berms to maintain the capacity of the secondary containment.

Facility employees working a watch in the tank farms are trained in the operation of the high liquid level alarms installed on all tanks, and procedure for the checking/testing of the internal probes at the control module. Checking/testing is done monthly and before the start of all barge transfers. The storage tanks are also fitted with auto tank level gauges for the employees to monitor the progress of the incoming fuel.

During the course of normal day-to-day operations at the Juneau Terminals, employees have been trained to observe all piping systems and tanks externally to look for obvious leaks or defects in the tanks or piping systems.

Tank Truck Operations

All personnel who operate the tank trucks and associated transfer piping systems are trained to inspect the equipment for evidence of leaks, spills, or maintenance issues.

Annual Refresher Training

Employees must annually demonstrate competency in the above areas of training. A record of the method used to demonstrate competency will be maintained. Refresher training must be conducted, as required, to correct any deficiencies discovered.

Safety Meetings

Safety meetings are conducted regularly. Records of the subjects discussed, and any actions taken are kept in the minutes of each meeting. These minutes are signed by every employee attending and are filed in the operations office to confirm the training and provide the necessary records.

Inspection Training

Terminal employees are responsible for periodic inspections of the facility and are designated and trained to observe facility infrastructure for evidence of leaks, spills, or situations at risk for leaks and spills.

Daily – Tank Farm and Tank Truck Operators are responsible for daily inspections of equipment for leaks, spills, or maintenance issues. These daily inspections are recorded on a form (located in Appendix A of this plan) and are kept for five years.

Monthly/Annual – The Terminal Manager or his Assistant perform more in-depth inspections on a monthly and annual basis. They are trained to perform the monthly inspections specifically required by API 653, STI SP001, and API 570. These inspections are recorded on a form (located in Appendix A of this plan) and are kept for five years.

Drill and Deployment Training

Spill response equipment and tactics are regularly drilled in accordance with the National Prevention, Response Exercise Program (NPREP), see Appendix A of this plan.

In addition, when there are government initiated regional drills (these occur approximately every three years) P49 personnel participate. All drills and deployment training are recorded on a form located in Appendix A of this plan, which is kept for 5 years.

ADEC requires a minimum of one operations-based exercise for each five-year renewal cycle of the ODPCP. The exercise must be performed in coordination with ADEC and in accordance with ADEC's Oil Spill Response Exercise Manual. The Oil Spill Response Exercise Manual is based on the doctrine and methodology laid out in the Department of Homeland Security Federal Emergency Management Agency's Homeland Security Exercise and Evaluation Program (HSEEP). For an exercise to meet the requirements of 18 AAC 75.485(b)(1), ADEC must be included in the planning phase through the execution and evaluation phases of the exercise. Additionally, the exercise must be based on a spill scenario in the ODPCP. See the Oil Spill Response Exercise Manual for more information. A link to the document is provided in Section 3.11 of this plan.

Section 3.9 Environmentally Sensitive Areas

18 AAC 75.451(k)

The Alaska Department of Conservation (ADEC), Environmental Protection Agency (EPA) – Region 10, and the United States Coast Guard (USCG) Sector Juneau manage response operations in accordance with the Alaska Regional Contingency Plan (RCP) and four Area Contingency Plans (ACP). The Juneau Terminal and Douglas Island Terminal operations are covered under the Southeast Alaska ACP Name (ADEC 2021). A link to this plan is located in Section 3.11 of this plan through a direct link or through the link to the Area Plan References and Tools website.

The Juneau Terminal is located along the eastern shore of Gastineau Channel, and the Douglas Island Terminal is located along the western shore of Gastineau Channel on Douglas Island. These waters and adjacent shorelines are primarily protected using effective spill prevention and have response strategies that ensure an effective and efficient spill response effort.

Drinking water sources would not be affected by a spill. The city of Juneau's water source is the Salmon Creek Reservoir and the Last Chance Basin. Both water sources are located at higher elevation than the Terminals.

The Planning Distance for non-persistent oils discharged into tidal waters is five miles from either facility down current during ebb tide and to the point of maximum tidal influence or five miles, whichever is less, during flood tide. The Planning Distance calculation is in compliance with EPA regulation 40 CFR 112, Appendix C, Attachment C-III.

Contact information for all federal and state agencies mentioned in this section are found in Table 1.2-4 in Section 1.2.1 of this plan. If there is oiled wildlife that needs to be captured, treated, and rehabilitated that exceeds Juneau's capabilities, the P49 will mobilize appropriate wildlife contractor(s) to respond, in coordination with NMFS, USFWS, and ADF&G. More information regarding wildlife protection is provided in Section 1.6.10 of this plan.

Section 3.9.1 Seasonal Conditions

18 AAC 75.451(k)(2)(A)

Wildlife and aquatic plants are more susceptible to the impacts of an oil spill during their critical periods of life that occur seasonally. Critical periods are generally defined as time periods where species are involved in migration, breeding, nesting, and/or rearing young. It may also refer to time periods during the life cycle of a species, such as the juvenile stages for fish, or larvae stage for aquatic insects.

Table 3.9-1 identifies critical periods for wildlife observed in the Juneau Terminal and Douglas Island Terminal area. This information can be used to determine additional ESA's during a spill response.

Table 3.9-1 Critical Life Periods of Wildlife and Aquatic Plant Life

SPECIES	MONTH											
	J	F	M	A	M	J	J	A	S	O	N	D
Present within 5 miles of terminal site												
<i>Birds</i>												
Black oystercatcher				X	X	X	X	X	X			
Glaucous-winged gull				X	X	X	X	X	X			
Marbled murrelet	X	X	X	XN	XN	XN	XN	XN	X	X	X	X
Pelagic cormorant				X	X	X	X	X	X			
Horned puffin				X	X	X	X	X	X			
Tufted puffin				X	X	X	X	X	X			
Black-legged kittiwake				X	X	X	X	X	X			
Pigeon guillemot				X	X	X	X	X	X			
Common murre				X	X	X	X	X	X			
Arctic tern				X	X	X	X	X	X			
Mew gull				X	X	X	X	X	X			
Semipalmated plover				X	X	X	X	X	X			
Aleutian tern				X	X	X	X	X	X			
Ancient murrelet				X	X	X	X	X	X			
Fork-tailed storm-petrel				X	X	X	X	X	X			
Leach's storm-petrel				X	X	X	X	X	X			
Spotted sandpiper				X	X	X	X	X	X			
Semipalmated plover				X	X	X	X	X	X			
Parasitic jaeger				X	X	X	X	X	X			
Short-tailed albatross ¹	X									X	X	X
Bald eagle	XF	XF	XF	XF NL	XF NL	XF NH	XF NH	XF N	XF	XF	XF	XF
Seabirds	X	X	X	X	X	X	X	X	X	X	X	X
Waterfowl and shorebirds	X	X	X	XN	XN	XN	XN	X	X	X	X	X
<i>Fish</i>												
Coho salmon	XE	XE	XE	XE	X	X	X	X	XS	XS	XS	XE
Chum salmon	XE	XE	XE	XE	X	X	XS	XS	XS	XE	XE	XE
Pink salmon	XE	XE	XE	XE	X	X	XS	XS	XS	XE	XE	XE
Sockeye salmon						X	X	X				
Chinook salmon	X	X	X	X	X	X	X	X	X	X	X	X
Dolly Varden	XE	XE	XE	X	X	X	X	XS E	XSE	XS E	XE	XE
Steelhead trout				XS	XS E	E	E	X	X	X		

Table 3.9-1 Critical Life Periods of Wildlife and Aquatic Plant Life

Three-spined Stickleback	X	X	X	X	X	X	X	X	X	X	X	X
Cutthroat trout	X	X	XS	XS	XS E	XS E	XE	X	X	X	X	X
MONTH												
SPECIES	J	F	M	A	M	J	J	A	S	O	N	D
<i>Marine Mammals</i>												
Sea otter	X	X	XP	XP	XP	X	X	X	X	X	X	X
Harbor porpoise	X	X	X	X	X	X	X	X	X	X	X	X
Dall porpoise	X	X	X	X	X	X	X	X	X	X	X	X
Killer whale	X	X	X	X	X	X	X	X	X	X	X	X
Humpback whale ¹	X	X	X	X	X	X	X	X	X	X	X	X
Steller sea lion ¹	X	X	X	X	XP	XP M	XM	XM	XM	X M	X M	X
Harbor seal	X	X	X	X	XP	XP	XM	XM	X	X	X	X
<i>Terrestrial Mammals</i>												
Brown bear	D	D	D	XD	XD	X	X	X	XD	D	D	D
Black bear	D	D	D	XD	XD	X	X	X	XD	D	D	D
Sitka black-tailed deer	X	X	X	X	X	X	X	X	X	X	X	X

Sources: (ADEC 2021), (NOAA 2001), (NOAA 2025a), and (ADF&G 2025a and b)

¹ Endangered species

Code	Life Stage	Code	Life Stage
N	Nesting	S	Spawning
H	Hatching	P	Pupping
F	Fledging	X	Multiple, undetermined
D	Denning	--	Blank cells indicate species is not present
E	Eggs		

Fish

Although Gastineau Channel is of limited importance to the commercial fishery of Southeast Alaska, several streams in the area receive runs of anadromous fish. Sheep Creek, across the Channel and about four miles south of the Douglas Island Terminal, supports runs of chum salmon, pink salmon, and Dolly Varden char. Lawson Creek, a little over a mile southeast from the Douglas Island Terminal, receives runs of pink salmon and Dolly Varden. Kowee Creek, adjacent (southeast) to the terminal on Douglas Island, receives a small run of pink salmon and Dolly Varden. Eagle Creek, a little over one mile northwest of the facility, has a run of coho salmon and Dolly Varden. Two unnamed streams just northwest of Eagle Creek have cutthroat trout, Dolly Varden, and/or pink salmon runs. Salmon Creek, across the Channel and about three miles northwest of the facility, has a brook trout, Dolly Varden, coho salmon, and pink salmon run (ADF&G 2025b).

Douglas Island Pink and Chum (DIPAC) operates fish hatcheries at Sheep Creek and Salmon Creek.

Several herring spawning sites are located along Gastineau Channel and herring are present year-round. The area of Gastineau Channel from Douglas south to Dupont is a known herring winter concentration area. Various species of rockfish and cod are also present in the Channel year-round. Their importance in terms of commercial and sport utilization is low. Gastineau Channel is not considered sensitive with respect to these fish (ADF&G 2025b).

Shellfish

Shrimp and Dungeness, tanner, and red king crab are commercially harvested within a five-mile radius of the facility. All of these species of crab and shrimp are taken in ADF&G Statistical Area 111-40 in Gastineau Channel. Populations of shellfish harvested commercially and recreationally are low (ADF&G 2025d).

Birds

Waterfowl and seabirds are present in Gastineau Channel throughout the year with the highest concentrations during spring migration. A large concentration of water birds arrive during the fall migration and in the winter months. Auke Bay and the Mendenhall Wetlands State Game Refuge are particularly sensitive. Marbled Murrelets have been observed in the Mendenhall Refuge. However, the entire area should be considered sensitive during migration. The peak spring migration is during April and May. The fall migration is in late July for shorebirds and late August and September for waterfowl (ADF&G 2025c). At all times, every effort should be made to disturb birds away from the area of a discharge. SEAPRO owns a gun hazing kit and other bird hazing devices are available from clean up contractors in Anchorage and Seattle. Hazing will not be undertaken without the approval of ADF&G and the U.S. Fish and Wildlife Service through the Unified Command System.

Bald eagles are present in large numbers throughout the area. Admiralty Island National Monument, located south and west of Juneau, has one of the largest known nesting areas of bald eagles (NPS 2017). Local beach areas are used heavily by these scavenging birds, as well as other avian and mammalian species.

Marine Mammals

The marine mammals most likely to be present in the Gastineau Channel are the harbor seal, sea otter, and sea lions, although not in large numbers.

Several species of whales and porpoises occasionally visit through Gastineau Channel, including killer, minke, and humpback whales (ADF&G 2025c).

Section 3.9.2 Product Toxicity

18 AAC 75.451(k)(2)(B)

Hydrocarbon-based fuels are complex mixtures of hundreds of chemicals. Smaller, light-end chemicals are more acutely toxic to organisms, but they volatilize rapidly into the atmosphere and are not persistent in the water column. In contrast, larger multi-ringed chemicals are more persistent in the environment and are more commonly associated with the fouling of fur and feathers of exposed wildlife. Fuels vary by the relative percentage of these two types of chemicals.

Highly volatile fuels such as gasoline and aviation gasoline are relatively less persistent in the environment (as opposed to viscous oils), because they contain a higher percentage of small, “light end,” volatile chemicals that are rapidly volatilized from the water column. Solubility of various compounds found in fuels is low in relation to volatility, so very little dissolves into the water column. What does dissolve tends to volatilize out of the water. Diesel fuel is slightly more persistent in the environment.

Ingestion of fuel could be toxic to all terrestrial and marine species. Dermal exposure to fuel can cause skin irritation as well. Tidal action keeps contact of fuel with the mollusks and aquatic plant life of the rocky shores short, but there could be some mortality. Extensive contact and damage could occur to mollusks and kelp growing on boat slips and the piers, particularly when contained behind a boom.

While the bulk of the fuel dissipates, “trace” contaminants, such as polycyclic aromatic hydrocarbons (PAHs), may persist in the environment. PAHs are chronically toxic and can be responsible for toxicity and environmental impacts for years after a spill. Very low levels can cause mortality to early life stages of fish.

Overall, the persistence of all oils stored at the Juneau Terminal and Douglas Island Terminal is minimal.

Potential Effects of Oil on Marine Plants and Animals:

Kelp Beds – if oil contamination occurs during plant reproduction, this and other annuals rarely recover. Kelp loss would then affect those that depend upon this resource (e.g., many species of algae, invertebrates, fish, and marine mammals).

Eelgrass Beds – Small quantities of oil can weaken the beds, affecting potential habitat for many birds, fish, and invertebrates.

Salt Marsh Vegetation – Evidence indicates little long-term damage from light oil contamination. However, heavy pollution can damage growth potential and cause plant death. Loss of this habitat would adversely affect many species.

Fish – Direct or indirect toxicity may affect adult or juvenile fish, while eggs or larvae may be damaged by coating or direct toxicity. Crustaceans, shellfish, and benthic fish species may be affected by direct coating or by eating contaminated food.

Birds – Spilled oil can harm birds in a variety of ways. Direct contact is toxic and can oil their feathers. This may result in a loss of their thermo-regulating abilities, their ability to maintain the proper salt balance as well as their ability to fly or float. Ingestion may affect reproduction. Embryo and chick survival may be reduced as a result of oil-coated eggs.

Marine Mammals – All marine mammals may be poisoned by feeding on oil-contaminated marine organisms or from ingesting oil while cleaning their fur. They may survive with small amounts of oil on their fur; however, oil will reduce the insulation capabilities of the fur and hypothermia may result. Sea otters are the most susceptible to reduction in insulation due to oil spills since, unlike other marine mammals, they do not have a blubber layer for insulation. Instead, sea otters rely on their thick fur to trap air, providing insulation and buoyancy. Otters have a very high metabolic rate and must eat about 25% of their body weight in forage each day to survive. Oiled otters often groom rather than foraging, leading to internal oil toxicity and insufficient caloric uptake. Oiled otters must be rescued quickly, or they rapidly succumb to hypothermia, oil toxicity, and/or starvation.

Inhalation of hydrocarbon vapors is a primary concern for marine mammal exposure to spilled oil. Potential effects can include decreases to individual fitness and mortality. Oil can irritate the mucous membranes of marine mammals.

Terrestrial Mammals – Throughout the year, oil discharges affecting streams and beach fringe areas may affect terrestrial mammals, including furbearers, by contaminating habitat and/or food sources.

Section 3.9.3 Identified ESAs for Juneau Terminals

18 AAC 75.451(k)(2)(C)

Most Environmentally Sensitive Areas (MESA): There is one MESA within five miles of the Juneau Terminal and Douglas Island Terminal (Appendix D) and it is listed below (ADF&G 1998):

- MESA #61, Mendenhall Wetlands

The area has high concentrations of waterfowl and shorebirds in the spring and fall. Additionally, there are eulachon and herring spawning areas and wintering sites for herring (ADF&G 1998).

Geographic Response Strategies (GRSs): There are no GRSs within five miles of the Juneau Terminal or Douglas Island Terminal.

Drinking Water Source: The drinking water sources for Juneau come from the Last Chance Basin and Salmon Creek Water Filtration Plant (CBJ 2025). The Last Chance Basin is located across the Gastineau Channel and uplands from the Juneau Terminals and would not be affected by a release. The mouth of Salmon Creek is located approximately 2.6 miles northwest of the bulk plant across Gastineau Channel. Salmon Creek is also an anadromous stream and is depicted in Figure 3.9-3 of this plan.

Fish Hatcheries: The DIPAC Hatchery is located just northwest across Gastineau Channel from the bulk plant. Figure 3.9-1 depicts the location of the hatchery.

Endangered Species and Critical Habitats: Steller sea lion habitat range encompasses the waters surrounding the Juneau Terminals. Steller sea lions are classified as an endangered species under the Endangered Species Act (ADF&G 2025g & NOAA 2025d).

The range of humpback whales overlaps with the area surrounding the Juneau Terminals (ADF&G 2025e). The species can be found in the waters surrounding Alaska any time of year, but they are more commonly found in the spring and summer when they come to Alaska to feed. They are listed as an endangered species and a critical habitat has been designated for the Western Distinct Population Segment; however, the critical habitat area does not overlap with the waters of Gastineau Channel (NOAA 2025c).

The range of North Pacific rights whales, fin whales, and sperm whales overlap with the area surrounding the Juneau Terminals. Migration of whales to the area commonly occur during the summer months for feeding. All three species are listed as endangered species (NOAA 2025a).

Short-tailed Albatross species range is widespread throughout the North Pacific. The birds are typically found along islands and coastlines. Their range overlaps with the area surrounding the Juneau Terminals. They typically only come to land to nest. They are listed as an endangered species under the Endangered Species act and by the State of Alaska. All three species are listed as endangered species (NOAA 2025c).

Wetlands: The Mendenhall Wetlands State Game Refuge begins approximately two miles northwest of the facility and stretches approximately nine miles to the northwest along Gastineau Channel. This 4,000-acre Refuge is a wetland estuary that supports aquatic and bird life, anadromous fish, herring, shellfish, bottom fish and sea mammals including harbor seals and occasional whales and sea lions. The stream mouths provide habitat for black bear, river otter and mink. Sitka Black-tailed deer winter along the shoreline of Gastineau Channel south of Sheep Creek. Bald eagles nest alongside the wetlands within one-eighth mile of the beach fringe.

Sensitive Shorelines: Table 3.9-3 describes the common shoreline types in the region, predicted oil behavior, and response considerations (NOAA 2001 and ShoreZone 2025).

Figure 3.9-1 Sensitive Areas

Current to: 2/25/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>

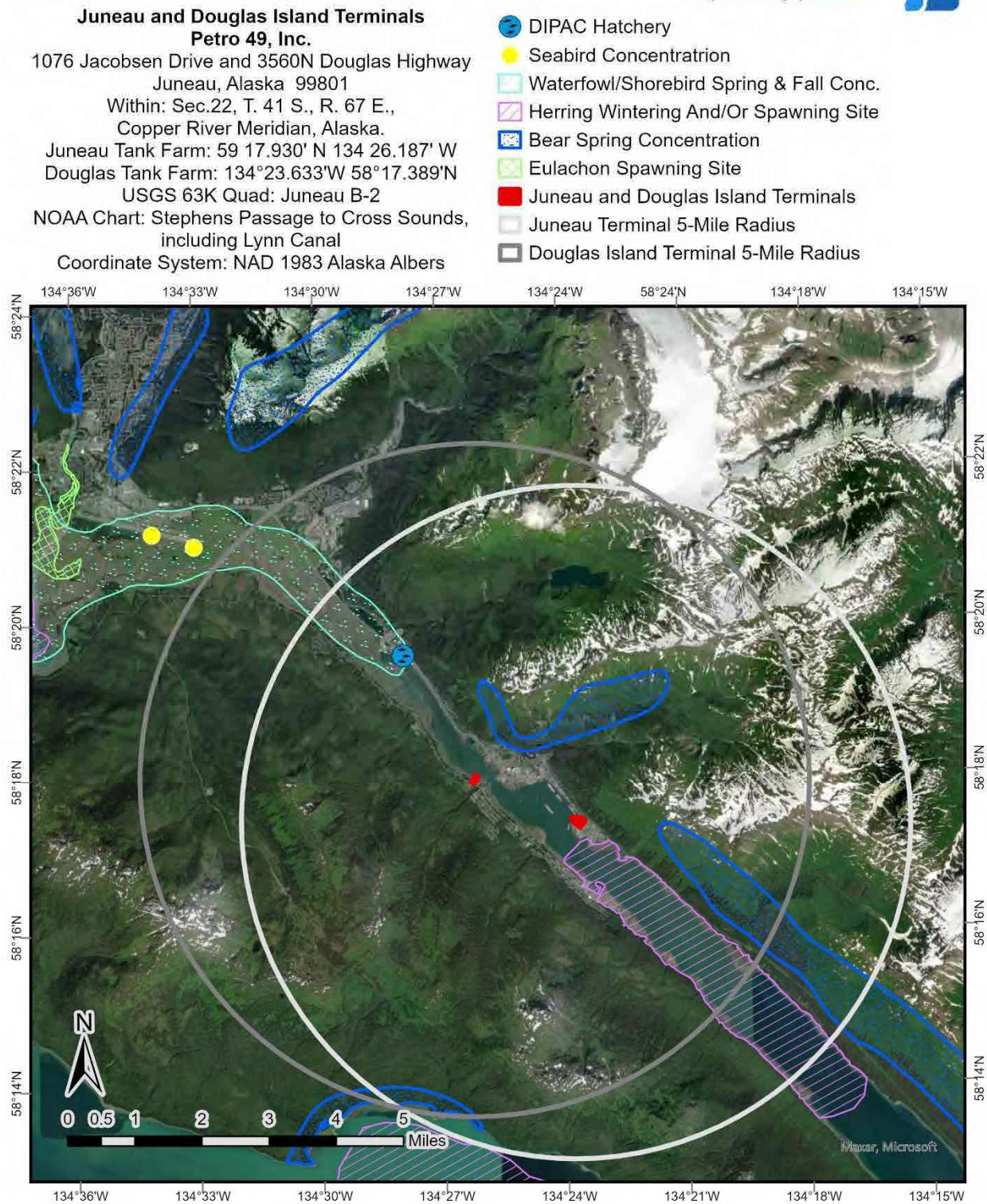


Figure 3.9-2 Shoreline Habitats

Juneau and Douglas Island Terminals

Petro 49, Inc.

1076 Jacobsen Drive and 3560N Douglas Highway
Juneau, Alaska 99801

Within: Sec.22, T. 41 S., R. 67 E.,
Copper River Meridian, Alaska.

Juneau Tank Farm: 59°17.930' N 134°26.187' W

Douglas Tank Farm: 134°23.633'W 58°17.389'N

USGS 63K Quad: Juneau B-2

NOAA Chart: Stephens Passage to Cross Sounds,
including Lynn Canal

Coordinate System: NAD 1983 Alaska Albers

Current to: 2/25/2025
Author: Integrity Environmental LLC
<http://www.integrity-env.com>



⚓ Marina, Moorage, or Harbor Facility

⚓ Boat Ramp

Ⓐ Aquaculture Facility

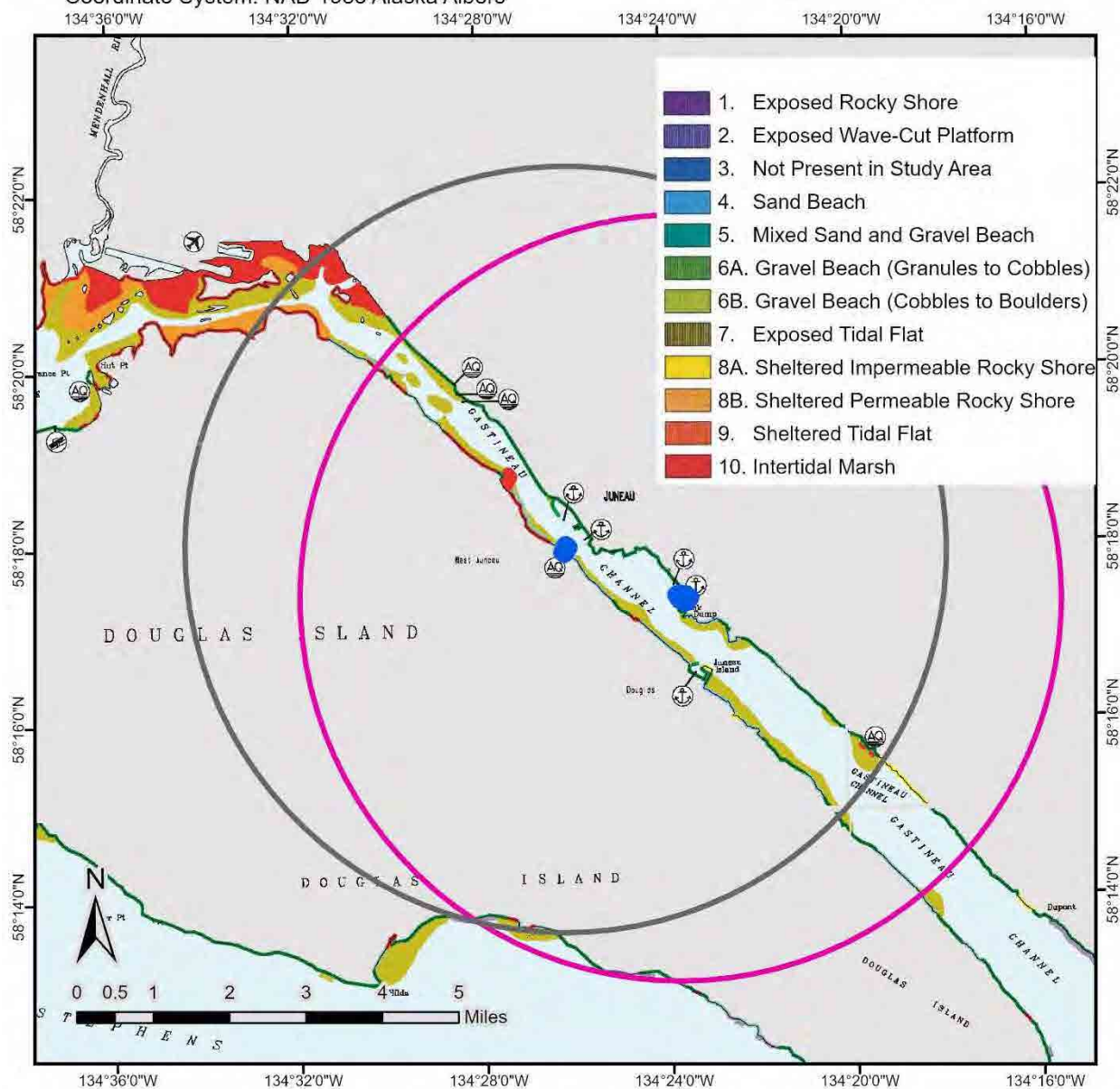
Ⓘ Log Storage Area

✈ Airport

■ Juneau and Douglas Island Terminals

■ Douglas Island 5-Mile Radius

■ Juneau Terminal 5-Mile Radius



Anadromous Water: Salmon spawn in most of the streams and rivers that drain into Gastineau Channel. See Figure 3.9-2 for a map of most anadromous waters within five miles of both Juneau Terminals. The sites most likely to be impacted by an oil spill at the Juneau Terminals are listed below in Table 3.9-2.

Table 3.9-2 Anadromous Waters Near the Juneau Terminals

Stream Name	AWC Stream Code	Stream Location (in relation to closest facility)	Species
Juneau Terminal			
Snowslide Creek	111-40-10240	≈0.8 miles SE, on the same side of Gastineau Channel	Coho (rearing)
Salmon Creek	111-40-10150	≈4.0 miles NW, on the same side of Gastineau Channel	Pink (present/spawning)
Neilson Creek	111-40-10960	≈4.9 miles NW across Gastineau Channel	Pink (present)
Lawson Creek	111-40-10890	≈0.6 miles W across Gastineau Channel	Dolly Varden (present)
Kowee Creek	111-40-10900	≈1.5 miles NW, across Gastineau Channel	Chinook (spawning)
Gold Creek	111-40-10200	≈1.0 miles NW, across Gastineau Channel	Coho (spawning and rearing)
Grant Creek	111-40-10910	≈2.3 miles NW on the same side of Gastineau Channel	Pink (spawning)
Eagle Creek	111-40-10920	≈2.9 miles NW on the same side of Gastineau Channel	Chum (present)
Sheep Creek	111-40-10280	≈3.2 miles SE, across Gastineau Channel	Dolly Varden (present)
Ready Bullion Creek	111-40-10860	≈3.1 miles SE on the same side of Gastineau Channel	Coho (rearing)
Bullion Creek	111-40-10850	≈3.6 miles SE on the same side Gastineau Channel	Dolly Varden (present)
Douglas Island Terminal			
Snowslide Creek	111-40-10240	≈2.5 miles SE, across Gastineau Channel	Coho (rearing)
Lemon Creek	111-40-10100	≈4.4 miles NW, across Gastineau Channel	Chinook (spawning)
Vanderbilt Creek	111-40-10125	≈4.1 miles NW, across Gastineau Channel	Coho (present)
Salmon Creek	111-40-10150	≈2.5 miles NW, across Gastineau Channel	Pink (present/spawning)

Table 3.9-2 Anadromous Waters Near the Juneau Terminals

Stream Name	AWC Stream Code	Stream Location (in relation to closest facility)	Species
Hendrickson Creek	111-40-10980	≈4.4 miles NW, on the same side of Gastineau Channel	Chum (spawning)
Lawson Creek	111-40-10890	≈1.2 miles SE on the same side of Gastineau Channel	Dolly Varden (present)
Kowee Creek	111-40-10900	Immediately east of the bulk plant	Chinook (spawning)
Gold Creek	111-40-10200	≈0.5 miles E, across Gastineau Channel	Coho (spawning and rearing)
Grant Creek	111-40-10910	≈0.5 miles NW on the same side of Gastineau Channel	Pink (spawning)
Eagle Creek	111-40-10920	≈1.3 miles NW on the same side of Gastineau Channel	Chum (present)
Falls Creek	111-40-10940	≈2.5 miles NW on the same side of Gastineau Channel	Coho (present)
Neilson Creek	111-40-10960	≈3.3 miles NW on the same side of Gastineau Channel	Pink (present)
Switzer Creek	111-40-10070	≈4.8 miles NW, across Gastineau Channel	Dolly Varden (present)
Sheep Creek	111-40-10280	≈3.6 miles SE, across Gastineau Channel	Dolly Varden (present)
Ready Bullion Creek	111-40-10860	≈3.4 miles SE on the same side of Gastineau Channel	Coho (rearing)
Bullion Creek	111-40-10850	≈3.9 miles SE on the same side Gastineau Channel	Dolly Varden (present)
East Creek	111-40-10060	~4.7 miles NW, across Gastineau Channel	Chum (present)

Sources: (ADNR 2025), (ADF&G 2025a) and (ADF&G 2025b)

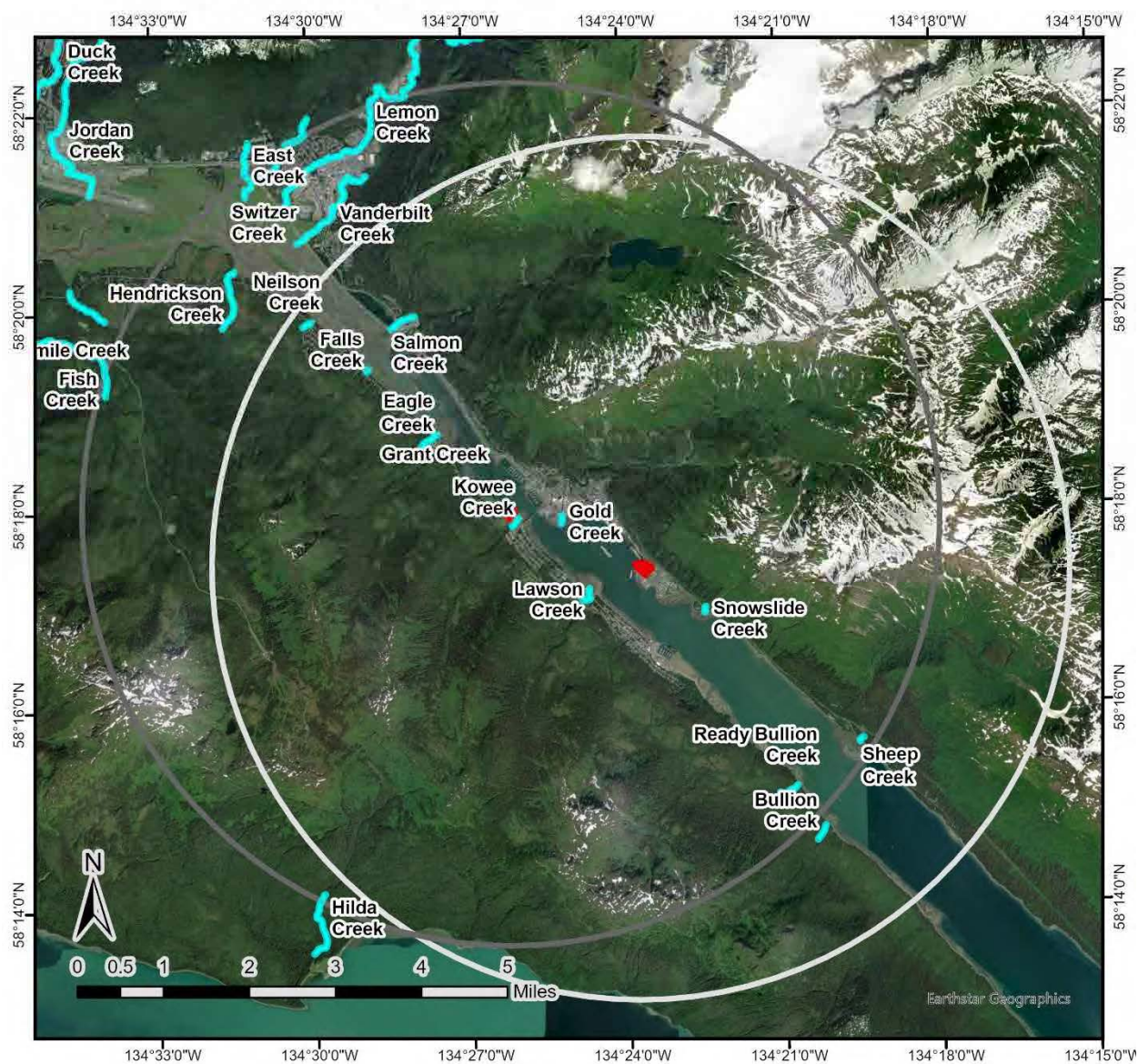
Figure 3.9-3 Anadromous Waters

Current to: 2/25/2025
 Author: Integrity Environmental LLC
<http://www.integrity-env.com>



Juneau and Douglas Island Terminals
Petro 49, Inc.
 1076 Jacobsen Drive and 3560N Douglas Highway
 Juneau, Alaska 99801
 Within: Sec.22, T. 41 S., R. 67 E.,
 Copper River Meridian, Alaska.
 Juneau Tank Farm: 59°17.930' N 134°26.187' W
 Douglas Tank Farm: 134°23.633'W 58°17.389'N
 USGS 63K Quad: Juneau B-2
 NOAA Chart: Stephens Passage to Cross Sounds,
 including Lynn Canal
 Coordinate System: NAD 1983 Alaska Albers

■ Juneau and Douglas Island Terminals
— Anadromous Water Body



Sensitive Shorelines Table 3.9-3 describes the common shoreline types in the region, predicted oil behavior, and response considerations (NOAA 2001).

Table 3.9-3 Shoreline Type and Predicted Oil Behavior

Shoreline	Description
Sand Beaches	• Moderately sloping beach with at least 75 percent of the surface substrate composed of sand particles (less than two millimeters in size). • Fine-grained sand beaches are uncommon; most sand beaches are coarse-grained. • During a small spill, oil will concentrate in a band along the high-tide line. • Under heavy accumulations, oil can cover the entire intertidal area. • Deepest burial will occur if the oil is stranded onshore at the beginning of an accretionary period, such as after a storm. • Sand beaches are relatively easy to clean because the usually hard substrate will support pedestrian and vehicular traffic. • Natural cleansing is the best option, especially during storm seasons, unless there is the potential for contamination of other resources using the beach.
Mixed Sand and Gravel Beach	• Moderately sloping beach composed of a mixture of sand and gravel (each greater than 25 percent). • 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. • During small spills, oil will be deposited along and above the high-tide swash. • During large spills, oil 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 percent. • Remove heavy accumulations of pooled oil from the upper beach face. • All oiled debris should be removed. • 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 the potential for transporting large amounts of oiled sediments to the lower intertidal or subtidal zone.
Gravel Beaches (Granules to Cobbles)	• Moderately sloping beach with at least 75 percent of the surface substrate made of sand particles. • Most sand beaches are coarse-grained. Fine gravel may be a minor component.

Table 3.9-3 Shoreline Type and Predicted Oil Behavior

Shoreline	Description
	• During a small spill, oil will concentrate in a band along the high-tide line. • Under heavy accumulations, oil can cover the entire intertidal area. • Oil will penetrate into coarse-grained sand slightly more than fine-grained sand. • Sand beaches are relatively easy to clean because the hard substrate can support pedestrian and vehicle traffic. • Oiled debris should be removed. • Natural cleansing is the best option, especially during storm seasons, unless there is the potential for contamination of other resources using the beach.
Exposed Tidal Flat	• Flat and unvegetated intertidal habitats; however, the substrate is dominated by sand, exposure to tidal currents or wave activity is evidenced by the presence of wave-built sand ridges or bars. • Commonly associated with mouths of streams or rivers, fronting marsh vegetation. • Clams and worms are abundant. In glacial outwash areas, boulders and cobbles have attached algae. • Oil does not usually adhere to the surface of exposed tidal flats, instead moves across and accumulates at high-tide lines. • Heavy accumulations will cover the flat at low tide but will be lifted off at high tide. • Oil does not penetrate the sediments. However refined products will penetrate any part of the flat which drains at low tide. • Oil will persist longest in the upper part of the flat. • Currents and waves are usually very effective in natural removal of oil. • Cleanup activity must be sure to not mix oil deeper into sediments. • Cleanup should be focused at the high-tide line, particularly where flat adjoins a beach.
Sheltered Impermeable Rocky Shore	• Bedrock shore of variable slope, which is sheltered from exposure to most wave and tidal energy. • Wider shores may have some surface sediments, but the bedrock is the dominant substrate type. • Species density and diversity vary greatly, with barnacles, snails, mussels, clams, periwinkles, amphipods, polychaetes, rockweed, and crabs being very abundant. • Oil will adhere readily to the rough, rocky surface, particularly along the high-tide line, forming a distinct oil band. • Fractures in bedrock will be sites of pooling and oil persistence. • Lower intertidal zone usually stays wet, preventing oil from adhering to rock surface.

Table 3.9-3 Shoreline Type and Predicted Oil Behavior

Shoreline	Description
	• Heavy and weathered oils can cover the upper zone with little impacts to the rich biological communities of lower zone. • Light refined products can affect attached organisms after even shore exposure. • Low- to high-pressure spraying at ambient water temperatures is most effective on fresh oil. • Extreme care should be taken to spray in the biologically rich lower intertidal zone. • Tidal action will eventually float oil off attached algae, sorbents should be deployed.
Sheltered Tidal Flats	• Flat and unvegetated intertidal habitats, sheltered from strong tidal currents or wave action. • Dominated by soft, muddy substrate. • Support a large population of benthic organisms and are important feeding and resting areas for birds and fish. • Oil penetration into this type of substrate will be limited, except where these water-saturated sediments are highly burrowed. • High biological utilization, soft-substrate, and low-energy setting make these areas highly sensitive to oil spills and almost impossible to clean.
Intertidal Marshes	• Intertidal habitats colonized by perennial vascular plants able to tolerate waterlogged soil conditions. • Provide nursery and feeding habitat for many species of fish and wildlife. • Marshes are highly susceptible to oil spills because they occur at the high-tide line where oil tends to concentrate. • They are the most sensitive intertidal habitat because of their high biological utilization and value, difficulty of clean up, and potential for long-term impacts to both habitats and the species which rely upon it.

Source: (NOAA 2001) and (ShoreZone 2025)

Protection of Areas of Public Concern: The Alaska Sensitive Areas Compendium provides ample details on those areas of public concern near Juneau. See Section 3.11 of this plan for a link to the Area Plan Reference Tools website. Listed below are the human resources used near Juneau:

- airport/heliport
- marinas
- boat ramps
- fish hatcheries
- aquaculture sites
- historic properties
- subsistence and personal use harvests
- commercial fishing
- sport fishing and hunting
- recreational sites and facilities
- state and federal parks
- public use cabins
- commercial tourism
- fish processing

Historical or Archeological Sites: The ACP contains information regarding known and unidentified archeological and historic sites. These sites are not identified here in order to protect them from scavenging. Oil spills and hazardous substance releases may result in direct and/or indirect impacts to those historic properties (ADEC 2021).

Caution will be used in cleanup operations to not disturb or impact any historical or archaeological sites during response. On-Scene Coordinators are responsible for ensuring that response actions take the protection of historic properties into account and that the statutory requirements for protecting them are met. The Alaska Regional Response Team (ARRT) has adopted the Alaska Implementation Guidelines for Federal On-Scene Coordinators for the Programmatic Agreement on Protection of Historic Properties During Emergency Response Under the National Oil and Hazardous Substances Pollution Contingency Plan that outlines federal On-Scene Coordinator responsibilities for protecting cultural resources and provides an expedited process for compliance with Section 106 of the National Historic Preservation Act during the emergency response phase. A link to this document is located in Section 3.11 of this plan.

During the initial response to a spill from the facility, P49 will coordinate response actions with the federal and state OSCs, Alaska Department of Natural Resources Office of History and Archaeology (OHA), and other appropriate land managers. If previously undiscovered artifacts or areas of historic, prehistoric, or archaeological importance are encountered during response, the facility IC will notify OHA immediately at the number listed in Table 1.2-4.

OHA will take the lead in working with the state and federal OSCs and P49 to ensure that response activities do not inadvertently injure or destroy historic properties, which are also known as historic and prehistoric archaeological resources. For significant spills, the federal OSC will assign a Historic Properties Specialist (HPS) to also coordinate with other stakeholders, including any cultural resource specialists working for P49.

Appendix A contains the application for an Alaska Cultural Resource Permit required from OHA for incident response actions that may affect known or suspected historic, prehistoric, or archaeological sites on Alaska state lands. This permit application must be submitted by the FOSC Historic Properties Specialist or other individual accepted as qualified by OHA. Similar actions on federal lands may require an Archaeological Resources Protection Act (ARPA) permit from the responsible agency.

Section 3.10 Additional Information

18 AAC 75.451(m)

Section 3.10.1 List of Acronyms

AAC	Alaska Administrative Code
ACP	Area Contingency Plan
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ARRT	Alaska Regional Response Team
ARPA	Archeological Resources Protection Act
AST	Aboveground Storage Tanks
ASTM	American Society for Testing Materials
ATG	Automatic Tank Gauge
BAT	Best Available Technology
bph	Barrels per hour
CDL	Commercial Driver License
CFM	Cubic feet per minute
CFR	Code of Federal Registration
CMDR	Commander
CUI	Corrosion Under Insulation
DIPAC	Douglas Island Pink and Chum, Inc.
DOT	Department of Transportation
DOI	Declaration of Inspection
DP&OR	Division of Parks and Outdoor Recreation
EA	Environmental Assessment
EDRC	Effective Daily Recovery Capacity
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FM	Frequency modulation
FOSC	Federal On Scene Coordinator
gph	gallons per hour
HP	Horse Power
HPS	Historic Properties Specialist
IAP	Incident Action Plan
IBR	International Bird Rescue
IC	Incident Commander
ICS	Incident Command System
IDLH	Immediate Danger to Life or Health
IMH	Incident Management Handbook
IMT	Incident Management Team
JBER	Joint Base Elmendorf-Richardson
kt(s)	knot, (knots)
LEL	Lower Explosive Limit

MAWP	Maximum Allowable Working Pressure
MESA	Most Environmentally Sensitive Areas
MRO	Medical Review Officer
MSO	Marine Safety Office
NACE	National Association of Corrosion Engineers
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPREP	National Preparedness for Response Exercise Program
NRC	National Response Center
OB	Out board
ODPCP	Oil Discharge Prevention and Contingency Plan
OHA	Office of History and Archeology
OMM	Operations and Maintenance Manual
OPA	Oil Pollution Act
OSC	On Scene Commander
OSHA	Occupational Safety and Health Administration
OSRO	Oil Spill Removal Organization
PEL	Personal Exposure Limit
PIO	Public Information Officer
PPE	Personal Protective Equipment
ppm	parts per million
PRAC	Primary Response Action Contractor
PREP	Preparedness for Response Exercise Program
psi	pounds per square inch
QI	Qualified Individual
RCP	Regional Contingency Plan
RPS	Response Planning Standard
RR	Railroad
SCA	Secondary Containment Area
SCAT	Shoreline Cleanup and Assessment Technique
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets
SERC	State Emergency Response Commission
SMT	Spill Management Team
TERT	Terminal Emergency Response Team
TLV	Threshold Limit Value
TSC	Total Storage Capacity
TTLR	Tank Truck Loading Rack
UHF	Ultra-high frequency
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
UT	Ultrasonic Thickness
VHF	Very high frequency
WCD	Worst Case Discharge

Section 3.11 Bibliography

18 AAC 75.451(n)

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Section 4.0 Best Available Technology Review

18 AAC 75.452(a)
18 AAC 75.452(c)

Section 4.0 of this Plan provides a discussion on the use of best available technology (BAT) requirements of 18 AAC 75.452(a). It identifies available technologies applicable to the P49 Juneau and Douglas Island Terminal operations and includes a written analysis and justification of each technology that the technology is the best available.

- 4.1 Field Communications
- 4.2 Source Control
- 4.3 Trajectory Analysis and Forecasts
- 4.4 Wildlife Capture, Treatment, and Release Methods
- 4.5 Leak Detection System for Tanks
- 4.6 Means of Immediately Determining Liquid Level of Tanks
- 4.7 Protective Coatings for Facility Piping

Section 4.1 Field Communications

18 AAC 75.452(a)(1)(A)
18 AAC 75.449(a)(4)

Field communications for spill response uses P49's portable marine VHF radios augmented by expanded networks built with SEAPRO's radios and portable repeaters. During spill response frequencies are assigned to specific functions and task forces or groups as prescribed in the SEAPRO's plans. The present technology offers more flexibility and expandability and is easily operated and familiar to most people. It is superior to higher technologies which require more training and are more expensive but do not necessarily improve communications. Refer to Section 1.4 of this plan for a description of field communications.

Table 4.1-1 BAT: Field Communications

Evaluation Criteria	Existing	Option 1	Option 2
<i>Technology Options</i>	<i>VHF Radios and Cell Phones</i>	<i>Portable VHF repeaters or UHF or FM system with portable repeaters.</i>	<i>Mobile response communication center (fly away)</i>
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Yes. Existing system is the standard marine radio communications available and in common use in the area. Approved by FCC.	Not in similar use nor is it readily available without new equipment.	Yes. System is available through the contract with SEAPRO.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	Yes.	Yes, it is transferable.	Yes.
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide increased spill prevention or other environmental benefits?	Effective marine/shore communications available in the port. Proven to be essential to increasing spill prevention.	No, on the contrary, a satellite system would not be as flexible at the existing system.	Yes, system would add increased communication in the event of a spill.
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	Low cost to service life	Higher cost to service life compared to VHF radios and cell phones.	Cost is dependent on amount of equipment requested and labor.

Table 4.1-1 BAT: Field Communications

Evaluation Criteria	Existing	Option 1	Option 2
<i>Technology Options</i>	<i>VHF Radios and Cell Phones</i>	<i>Portable VHF repeaters or UHF or FM system with portable repeaters.</i>	<i>Mobile response communication center (fly away)</i>
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	The technology in use is excellent and very widely used.	Satellite technology is newer than the technology in use.	The technology in use is excellent and proven technology.
COMPATIBILITY: Is the technology compatible with existing operations?	Yes.	Satellite technology is not compatible with other communication technologies now in use.	Yes.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	N/A	Changing communications to satellite technology would lessen practical operations by introducing unfamiliar methods.	Feasible with current communication system.
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	None.	None.	None.

BAT Summary – Existing communication system has the capability to provide reliable communications between the Command Center and all Section Chiefs during a spill incident. Existing technology is justified by all evaluation criteria.

Section 4.2 Source Control

18 AAC 75.452(a)(1)(B)
18 AAC 75.449(a)(6)(G)

Described as procedures to stop a discharge at its source and prevent its spreading. The methods used include temporary patching pipelines, valve shutoff, transfer product from leaking tanks, blocking the flow of spilled oil, and containment booming of oil on water. Limitation of space and economic feasibility preclude the use of alternatives.

Table 4.2-1 BAT: Source Control

Evaluation Criteria	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Patches, shut off valves, transfer, blocking flow on land and water</i>	<i>Automatic valve shutoff</i>	<i>Tertiary containment</i>
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Yes; easily available and in common use for small bulk plants	Yes; inspections are required for all facilities of this size.	Yes; similar systems are used in manufacturing and small quantity disbursement facilities.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	Yes, existing.	Yes.	Yes.
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide increased spill prevention or other environmental benefits?	N/A	For piping leak, may shut off flow faster than a crew member could. In storage area leaks, it will make no difference in response.	Would be effective for spills outside the secondary containment.
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	N/A	High cost of installation and ongoing maintenance, software updates.	High cost for limited benefit.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	The valves, pumps, boom, etc. are maintained regularly and replaced when needed.	N/A	N/A

Table 4.2-1 BAT: Source Control

Evaluation Criteria	Existing	Existing	Option 1
COMPATIBILITY: Is the technology compatible with existing operations?	Yes.	Yes.	Yes.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Yes.	Yes.	Not operationally feasible because of the space required.
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	None.	None.	N/A because there is no space to build.

The combination of existing technology, transfer procedures, emergency training, and containment equipment provide for effective discharge control capability. Existing technology is justified by all evaluation criteria.

Section 4.3 Trajectory Analysis and Forecasts

18 AAC 75.452(a)(1)(C)
18 AAC 75.449(a)(6)(E)

Movement of the oil slick is monitored by observers from aircraft. Forecasting the slick movement is done based on observed movement and tide and wind forecasts. The existing system is the most easily employed and provides the most accurate information most promptly.

Table 4.3-1 BAT: Trajectory Analysis and Forecasts

Evaluation Criteria	Existing	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Visual monitoring</i>	<i>Charter local planes to aerially observe location and movement of oil on water.</i>	<i>NOAA WebGNOME spill modeling</i>	<i>Tracking buoys and advanced computer modeling</i>
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Yes, existing.	Yes, observers in aircraft are best for the size of spill anticipated and the short term on water.	Technology is available and used extensively in oil spill response.	Yes.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	Yes, existing.	Yes, existing.	Yes.	Yes.
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide increased spill prevention or other environmental benefits?	Effective for small to medium sized spills, or spills entrained along the coastline.	Existing system is the most effective; information is reliable and is available immediately. Effective for all size spills during daylight hours.	The spill model is most effective for determining the trajectory of a release in open ocean.	Effectiveness increased with the size and distribution of the spill. Electronic data is very effective for advance computer modeling and can provide information on

Table 4.3-1 BAT: Trajectory Analysis and Forecasts

Evaluation Criteria	Existing	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Visual monitoring</i>	<i>Charter local planes to aerially observe location and movement of oil on water.</i>	<i>NOAA WebGNOME spill modeling</i>	<i>Tracking buoys and advanced computer modeling</i>
				the spill trajectory clock.
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	Annual costs for training personnel and maintenance of skiffs.	Cost would be charter fees for aircraft and pilot. Costs can be reduced by pairing flyovers with aircraft already chartered to mobilize personnel and equipment.	Model is free. No costs incurred.	Increased cost to rent buoys, salary for NOAA computer modeling staff.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	Skiffs are maintained in good condition and regularly used in drills.	Only planes in good condition will be chartered.	GNOME was originally released in 2002. The program is continually updated, and new location files are added occasionally.	NOAA maintains the most up to date computer modeling technology. Only compatible buoys would be rented.
COMPATIBILITY: Is the technology compatible with existing operations?	Yes, existing.	Yes, existing.	Technology is compatible with facility operations.	Yes.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Yes.	Yes.	This technology is feasible.	Yes

Table 4.3-1 BAT: Trajectory Analysis and Forecasts

Evaluation Criteria	Existing	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Visual monitoring</i>	<i>Charter local planes to aerially observe location and movement of oil on water.</i>	<i>NOAA WebGNOME spill modeling</i>	<i>Tracking buoys and advanced computer modeling</i>
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	None.	None.	None.	None.

The combination of the available surveillance, data and tracking methods is the best available for facility operations. The existing technology/capability is justified by consideration of all evaluation criteria.

Section 4.4 Wildlife Capture, Treatment, and Release Methods

18 AAC 75.452(a)(1)(D)
18 AAC 75.449(a)(6)(M)

Contaminated wildlife is captured and stabilized by qualified personnel contracted through SEAPRO from the IBR, IWR, or other qualified agencies. After stabilization at the site, the injured animals are transported for rehabilitation to one of several facilities in the state. Refer to ODPCP Sections 1.6.4, 1.6.10, and 3.9.

The existing system provides the best level of animal care (and thus, is considered the best available technology) by assuring that cleanup and rehabilitation are done at proper facilities and by trained personnel.

If the situation warranted a mobile or field facility set up, SEAPRO, IBR, and IWR have equipment and processes in place.

Table 4.4-1 BAT: Wildlife Capture, Treatment, and Release Methods

Evaluation Criteria	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Contract with SEAPRO to provide wildlife hazing/protection through subcontract with IBR and IWR.</i>	<i>Contracted experts capture impacted animals and stabilize in the field, then transport to Anchorage, Seward, or Sitka facilities for treatment and rehab.</i>	<i>Treatment and rehab in the field using a portable facility.</i>
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Yes, existing.	Yes, existing.	IWR does have portable conex based field facilities available.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	Yes, existing.	Yes, existing.	Yes, although the logistics for mobilizing this type of facility would be complicated and only be transferrable for an extremely large wildlife or bird population impacted by a spill.

Table 4.4-1 BAT: Wildlife Capture, Treatment, and Release Methods

Evaluation Criteria	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Contract with SEAPRO to provide wildlife hazing/protection through subcontract with IBR and IWR.</i>	<i>Contracted experts capture impacted animals and stabilize in the field, then transport to Anchorage, Seward, or Sitka facilities for treatment and rehab.</i>	<i>Treatment and rehab in the field using a portable facility.</i>
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide increased spill prevention or other environmental benefits?	Effective as long as contracted staff arrive onsite quickly.	System in place has the best chance of treating and rehabilitating more animals, especially with the reliable air service available in Juneau.	Effective treatment facilities require significant enclosed and heated storage areas for animals waiting for cleanup and for holding until release.
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	Cost is included in annual PRAC contract.	Cost is included in annual PRAC contract.	Costs would be unique to location, staffing costs, and rental agreements. Estimated as much higher than offsite treatment.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	IBR and IWR staff are professionally trained and use field tested and agency approved methods for hazing and wildlife protection.	IBR and IWR staff are professionally trained and use field tested and agency approved methods for collecting and moving impacted animals/birds. IBR and IWR have established procedures for transferring and accepting wildlife. IWR is uniquely qualified to work with marine mammals and other populations.	Any portable facility mobilized to the facility would be in good condition.
COMPATIBILITY: Is the technology compatible with existing operations?	Yes, existing.	Yes, existing.	Yes.

Table 4.4-1 BAT: Wildlife Capture, Treatment, and Release Methods

Evaluation Criteria	Existing	Existing	Option 1
<i>Technology Options</i>	<i>Contract with SEAPRO to provide wildlife hazing/protection through subcontract with IBR and IWR.</i>	<i>Contracted experts capture impacted animals and stabilize in the field, then transport to Anchorage, Seward, or Sitka facilities for treatment and rehab.</i>	<i>Treatment and rehab in the field using a portable facility.</i>
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Yes.	Yes.	Yes, although access to water and electricity could be difficult to meet in the staging area.
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	None.	None.	None.

Existing technology/capability is considered the best available by consideration of all evaluation criteria and in accordance with the *Wildlife Protection Guidelines for Oil Spill Response in Alaska (version 2020.1)*

Section 4.5 Leak Detection Systems for Tanks

18 AAC 75.452(a)(2)(A)
18 AAC 75.065(i)(4), (j)(4)

All tanks at the Juneau Terminal have a double bottoms, constructed by reinforced concrete on the previously lined existing bottoms and ¼" carbon steel plate placed on top of the concrete to create a double bottom for each tank. Eight grooves in the concrete extend from the center column outward to form inspection ports at the exterior shell for leak detection purposes. These leak detection ports are monitored on a weekly basis with a gas detector.

All tanks at the Douglas Island Terminal are underlain by an impermeable liner installed into the foundation of each tank in 1993. For Tanks 1 – 4, telltale pipes with valve closures exit the concrete ring wall foundation to allow an observer outside of the tank to detect a leak. Tanks 5 – 11 are on a 12- to 15-inch steel reinforced impermeable concrete slab supported on pilings. Radial grooves in the slab drain bottom leaks out from under the tanks into the secondary containment area where they can be observed.

Additionally, the tanks at the Douglas Island Terminal have the Pneumercator TMS 2000 system installed, which provides continuous liquid level monitoring for each tank and displays in the P49 Douglas Island Terminal office. Section 2.5.3 of this plan fully describes all leak detection systems.

This represents the best available technology. Therefore, no analysis is required or provided.

System complies with ADEC standards/requirements. In consideration of AS 46.04.030(e), no further "alternative" analysis for this BAT is necessary.

Section 4.6 Means of Immediately Determining Liquid Level of Tanks

18 AAC 75.452(a)(2)(C), 18 AAC 75.065(k)(3) and (4)

At the Juneau Terminal, tank operators can immediately determine the liquid level of each bulk storage tank by reading the Morrison clock gauge liquid level indicators. The Outalarm™ A-100 portable overfill alarms and Morrison Clock gauge liquid level indicators meet the requirements of 18AAC 75.065(k) for the Juneau Terminal tanks. Liquid level monitoring systems / overfill alarms are highly effective and more accurate than only hand gauging by personnel, therefore the preferred technologies.

At the Douglas Island Terminal, tank operators can immediately determine the liquid level of each bulk storage tank by reading the display panel of the sensitive gauging systems located in the main office. The Douglas Island Terminal tank farm is served by the Pneumercator Liquid Level Control System (Model TMS 2000). This sensitive gauging system provides a constant and accurate readout of the liquid level of each bulk storage tank. Operators can also read the mechanical tank gauge installed and maintained on each tank.

More information on both systems is in Section 2.5.3 of this plan. This represents the best available technology. Therefore, no analysis is required or provided.

Systems comply with ADEC standards/requirements. In consideration of AS 46.04.030(e), no further “alternative” analysis for this BAT is necessary.

Section 4.7 Protective Coatings and Corrosion Control Program for Facility Piping **18 AAC 75.452(a)(2)(D)**
18 AAC 75.080(l) and/or (m)(2)

P49's corrosion control program includes the existing coating and pipe wrapping and an ongoing API 570 inspection schedule. The Plan Holder's corrosion control program includes the existing coating and pipe wrapping that provide corrosion control against atmospheric conditions. In order to maintain the condition of facility piping and make any necessary repairs, the Plan Holder participates in ongoing API 570 inspections. Additionally, Plan Holder personnel visually inspect facility piping on a monthly basis and document the inspections on their monthly facility inspection checklist.

Please refer to Section 2.5 of this plan for further information on the corrosion control programs in place.

Table 4.7-1 BAT: Protective Coatings and Corrosion Control Program for Facility Piping

Evaluation Criteria	Existing	Option 1
<i>Technology Options</i>	<i>Pipe Coating, Wrapping</i>	<i>Polyethylene Coating</i>
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Yes, existing.	Yes.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	Yes, existing	Yes.
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide increased spill prevention or other environmental benefits?	This approach is has provided effective prevention of atmospheric corrosion.	Yes, this approach is proven to be effective.
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	One-time installation cost. Regular inspections are required to inspect for areas of coating/wrap failure. Coating/wrap must be repaired periodically.	Moderate initial cost for installation. Regular inspections are required for areas of coating failure.

Table 4.7-1 BAT: Protective Coatings and Corrosion Control Program for Facility Piping

Evaluation Criteria	Existing	Option 1
<i>Technology Options</i>	<i>Pipe Coating, Wrapping</i>	<i>Polyethylene Coating</i>
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	Installed dates span throughout the years from the 1970s to 2019, requires regular maintenance and monitoring.	N/A
COMPATIBILITY: Is the technology compatible with existing operations?	Yes.	Yes.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Yes.	Yes.
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	None.	None.

Section 5.0 Response Planning Standard

18 AAC 75.453
18 AAC 75.432(d)

Section 5.1 ADEC Adjusted Response Planning Standard

The largest tank at the Juneau Terminal is Tank 22, containing diesel #2. See Section 3.2.2 for a discussion of the estimated volume of oil to reach open water. The State requires the estimated volume to reach water to be contained and recovered in 72 hours. This plan meets that requirement.

The state regulations allow for calculation of a reduced response planning standard for prevention measures in place. P49 has taken credit for two such prevention measures it has in place, alcohol and drug testing of key personnel and impermeable secondary containment.

The basis for the five percent reduction taken for alcohol and drug testing is the Substance Abuse Program described in 2.1.2 of this plan, for all the personnel in critical jobs (called key personnel in the state regulations).

The basis for the 60 percent and 25 percent reductions taken for secondary containment is described in Section 2.5.5 of this plan, Secondary Containment Areas.

A calculation of the applicable response planning standards, including a detailed basis for the calculation for reductions, is displayed in the table below.

		% Reduction	Volume (gallons)	
18 AAC 75.453 18 AAC 75.432(b)	Volume of the largest oil storage tank (Tank 22)			1,012,961
18 AAC 75.432(d)(1)	Alcohol and drug testing of key personnel:	5	-50,648	962,313
18 AAC 75.432(d)(4)	A sufficiently impermeable secondary containment area with a dike capable of holding the contents of the largest tank plus precipitation:	60	-577,388	384,925
18 AAC 75.432(d)(5)(C)	Impervious containment area extending under the full area of each storage tank or double bottoms with leak detection:	25	-96,231	288,694

Adjusted Response Planning Standard:	288,694 gallons / 6,873.7 barrels
Amount Estimated to Reach Open Water	144,347 gallons / 3,436.8 barrels

Section 5.2 EPA Response Planning Volumes

Table 5.2-1 EPA Worksheet to Plan Volume of Response Resources for WCD

Part I Background Information			
Step (A)	Calculate Worst Case Discharge in barrels (Appendix D)	24,118 bbl	
Step (B)	Oil Group (Table 3 and Section 1.2 of Appendix E)	1	
Step (C)	Operating Area (choose one)	X	Near shore/inland Great Lakes or rivers and canals
Step (D) Percentages of Oil (Table 2 of Appendix E)			
Percentage Lost to Natural Dissipation		Percent Recovered Floating Oil	Percent Oil Onshore
80		20	10
(D1)		(D2)	(D3)
Step (E1)	On-Water Oil Recovery	$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$	4,823.6
Step (E2)	Shoreline Recovery	$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$	2,411.8
Step (F)	Emulsification Factor (Table 3 of Appendix E)	1.0	
Step (G)	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of Appendix E)		
Tier I		Tier II	Tier III
0.15		0.25	0.40
(G1)		(G2)	(G3)
Part II On-Water Oil Recovery Capacity (barrels/day)			
Tier I		Tier II	Tier III
723.5		1,205.9	1,929.4
Step (E1) x Step (F) x Step (G1)		Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)
Part III	Shoreline Cleanup Volume (barrels)		2,411.8
			Step (E2) x Step (F)
Part IV	On-Water Response Capacity by Operating Area (Table 5 of Appendix E)		
Tier I		Tier II	Tier III
12,500		25,000	50,000
(J1)		(J2)	(J3)
Part V	On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)		
Tier I		Tier II	Tier III
0		0	0
Part II Tier I – Step (J1)		Part II Tier II – Step (J2)	Part II Tier III – Step (J3)

Section 5.3 USCG Response Planning Volumes

The volume calculations provided below are based on the pipeline at the Douglas Island Terminal. This location has a larger pipeline volume than the Juneau Terminal.

Table 5.3-1 USCG Worst Case Discharge Volume

	Volume (bbl)	Volume (gal)
<i>Worst Case Discharge</i>		
Time to discover spill and shut down	Max Flow Rate	
0.1 hours at	3,571 bbls/hr	357 14,994
Volume of pipelines:	70	2,940
WCD Planning Volume:	427	17,934
<i>Maximum Most Probable Discharge</i>		
Lesser of 10% or 1,200 bbls:	42.7	1,793
<i>Average Most Probable Discharge</i>		
Lesser of 1% or 50 bbls:	4.27	179

USCG Mobile MTR Facility

The worst case discharge for a USCG Mobile MTR facility is the loss of the entire contents of the container in which oil is transported. The Juneau and Douglas Island Terminals deliver fuel to vessels with a capacity of 250 bbls or more from its tank trucks. These are considered to be mobile MTR facilities under the USCG regulations. The tank trucks used as mobile facilities are listed in Table 3.6-1 Response Equipment in the section listing temporary storage. The largest container in which the trucks transport oil is 4,700 gallons (111.9 bbls) which is, therefore, the worst case discharge volume for the Mobile MTR facility.

33 CFR Part 154.1040 requires substantial harm facilities (which include mobile facilities, §154.1015) to meet all requirements of §154.1035 except for the organization to manage a response (See Section 3.3), and the equipment requirements call for everything required by §154.1035, except containment boom is limited to 200 feet. Because these requirements are nearly duplicate for the MTR facility and the mobile MTR facility, this plan is submitted to fulfill both requirements.

USCG Average Most Probable Spill Mitigation

The equipment and personnel for mitigation of the average most probable spill (four bbls) are as follows. The personnel and their responsibilities are listed in Table 1.2-3. The equipment for mitigating the spill is listed below:

- Containment and sorbent boom
- Deployment skiff
- Sorbent pads and sweeps
- Plastic bags

APPENDIX A

FORMS

OPERATIONAL FORMS CHECKLIST

Daily Forms

- ☐ Daily Inspection Form

Monthly Inspection Forms

- ☐ Monthly Inspection Form
- ☐ Monthly ODPCP Verification Log
- ☐ Monthly Spill Log (minor spills)
- ☐ Declaration of Inspection (DOI) Form (may be less than monthly dependent on vessel traffic)

Semi-Annual & Annual Forms

- ☐ Semi-annual Spill Response Equipment Inspection
- ☐ Annual NPREP Checklist
- ☐ Discharge Prevention Meeting Log

PLANT INSPECTION FORM
JUNEAU TERMINAL
(per 18 AAC 75 and API 653)

Daily Inspection

Date

- | | |
|--|---|
| ☐ No damage or leaks to storage tanks & leak detection ports | ☐ No vapors detected (odor, visual) |
| ☐ Secondary containment clean & free of debris | ☐ No liquid leaks detected (sheen/drips/etc.) |
| ☐ No cracks, vegetation or defects to secondary containment liner for tank farm | ☐ No cracks, corrosion damage |
| ☐ No damage to the emergency storage tanks | ☐ No stained containment, stained ground, dead vegetation, or snowmelt |
| ☐ TTLR SCA & OWS is free of defects/damage/debris/sheen | ☐ No distortion, pipes supported |
| | ☐ Valves locked |
| | ☐ Yard secure and locked |

Secondary Containment Drainage

Date

Water is free of pollutants (no sheen)	☐ Yes	☐ No
Estimate water depth in inches before draining:		inches
Start time:	Stop Time:	
Provisions made for containing any pollutants:		

Remarks or problems noted:

Signature of Inspector: _____ **Date:** _____

PLANT INSPECTION FORM
JUNEAU TERMINAL
(per 18 AAC 75 and API 653)

Monthly Inspection

Date

*Inspector will indicate satisfactory condition with a check mark.
Unsatisfactory conditions will be noted at the bottom of this form.*

Tank ID/ Product Service	Tank 21 Diesel #1	Tank 22 Diesel #2	Tank 23 Jet A	Tank 24 Jet A	Tank 25 Diesel #2
High Level Alarms					
Liquid Level Gauge					
Tank vents					
Floating Roof					
Inlet Valves					
Outlet Valves					
Water Drain					
No Leaks					
No Shell Settlement / Distortion / Corrosion					
Shell Coating ¹					
Foundation					
Appurtenances					

¹Note paint failure, pitting, or corrosion observed in the comments (API 653, Annex C).

- ☐ Secondary containment free of defects/damage/debris
- ☐ Aboveground pipe coating in good condition
- ☐ Response equipment is accessible, in good condition
- ☐ Oil-water separators are oil/sheen free and in good condition

Remark or problems noted:

Signature of Inspector: _____ **Date:** _____

PLANT INSPECTION FORM
DOUGLAS ISLAND TERMINAL
(per 18 AAC 75 and API 653)

Daily Inspection

Date

- | | |
|---|--|
| <ul style="list-style-type: none">☐ No damage or leaks to storage tanks and leak detection ports☐ Secondary containment clean & free of debris☐ No cracks, vegetation or defects to secondary containment liner for tank farm☐ No damage to the emergency storage tanks☐ TTLR SCA & OWS is free of defects/damage/debris/sheen | <p>Signs of leaking valves, pumps or pipes:</p> <ul style="list-style-type: none">☐ No vapors detected (odor, visual)☐ No liquid leaks detected (sheen, drips, etc.)☐ No cracks, corrosion damage☐ No stained containment, stained ground, dead vegetation, or snowmelt.☐ No distortion, pipes supported☐ Valves locked☐ Yard secure and locked |
|---|--|

Secondary Containment Drainage

Date

Water is free of pollutants (no sheen)	☐	Yes	☐	No
Estimate water depth in inches before draining:				inches

Start time:	Stop Time:
-------------	------------

Provisions made for containing any pollutants:

Remarks or problems note:

Signature of Inspector: _____ **Date:** _____

PLANT INSPECTION FORM
DOUGLAS ISLAND BULK TERMINAL
(per 18 AAC 75 and API 653)

Monthly Inspection

Date

Tank ID/Product Service	Tank 1 UNL	Tank 2 UNL	Tank 3 SUP Gas	Tank 4 Avgas	Tank 5 UNL	Tank 6 UNL	Tank 7 Jet A	Tank 7 ULSD	Tank 7 ULSD	Tank 7 ULSD
High Level Alarms										
Liquid Level Guage										
Tank Vents										
Floating Roof										
Inlet Valves										
Outlet Valves										
Water Drain										
No Leaks										
No Shell Settlement / Distortion / Corrosion										
Shell Coating ¹										
Foundation										
Appurtenances										

¹Note paint failure, pitting, or corrosion observed in the comments (API 653, Annex C).

*Inspector will indicate satisfactory condition with a check mark.
Unsatisfactory conditions will be noted at the bottom of this form.*

- ☐ Secondary containment free of defects/damage/debris
- ☐ Above ground pipe coating in good condition
- ☐ Response equipment is accessible, in good condition
- ☐ Oil-water separators are oil/sheen free and in good condition

Verify that each component of the gasoline distribution system is free of leaks, vapors, or damage.

- ☐ Gasoline service piping (above ground segments)
 - ☐ Gasoline service pumps
 - ☐ Tank Truck Loading Rack
 - ☐ Gasoline service high flow fill station
- Any gasoline leaks detected and their repairs must be recorded in the Air Compliance Log Book*

Remarks or problems note:

Signature of Inspector: _____ **Date:** _____



Contingency Plan Verification Log

This log is to be completed by terminal facility owners/operators who are subject to the requirements of AS 46.04.030 and 18 AAC 75, Article 4, and who transfer petroleum to or from tank vessels, oil barges, non tank vessels over 400 GRT or rail cars carrying petroleum products as cargo in Alaskan waters. Completion of this form is required by 18 AAC 75.465. Per regulation this form must be submitted to the department during the first five days of the current month for the previous month's deliveries.

Please Type or Print Clearly

Month/Year _____

Terminal Name: _____

Terminal Owner: _____ **Telephone:** _____

Terminal Address: _____

Date	Name of Vessel (Please Print)	Vessel Contingency Plan Holder (Company Name) (Please Print)	Vessel Operator Signature ¹	Terminal Owner or Operator Signature ²

¹ **VESSEL OPERATOR**, by signature, hereby certifies that a current copy of the response action plan section of the current approved oil discharge prevention and contingency plan for that vessel or barge is onboard the vessel or barge.

² **TERMINAL OWNER OR OPERATOR**, by signature, hereby certifies that the vessel operator has produced for his or her inspection an original or true photocopy of the certificate of approval for the oil discharge prevention and contingency plan which covers the operations of that vessel or barge. {An approval letter authorizing specific dates of operation is also required for a chartered vessel, which is temporarily covered under a contingency plan.}

18 AAC 75.465. Proof of approved plan

(a) The owner or operator of an oil terminal facility may not cause or permit the transfer of oil to or from a vessel, barge, or railroad tank car unless

(1) the operator of the vessel, barge, or railroad tank car has produced for inspection by the facility owner or operator the original certificate or a true photocopy of the original, approving the oil discharge prevention and contingency plan or nontank vessel plan for that operation; and

(2) the operator of the vessel, barge, or railroad tank car has certified, on a certification log form supplied by the department and maintained by the owner or operator of the oil terminal facility, that a copy of the response action plan section of the current approved oil discharge prevention and contingency plan, or the original certificate or a true photocopy of the original nontank vessel plan approval certificate, for that vessel or barge is on board the vessel or barge.

(b) The owner or operator of an oil terminal facility shall certify on the certification log form that the operator of the vessel or barge has complied with (a)(1) and (2) of this section. The facility owner or operator shall maintain the log on a monthly basis and shall submit the log for the previous month to the department within the first five days of the following month. Service is effective upon personal delivery or transmittal by facsimile or on the date of mailing by certified mail to the department. The department will retain copies of all log forms received under this subsection for three years after receipt.

(c) On the first working day after the operator of a vessel or railroad tank car fails to comply with the requirements of (a)(1) or (2) of this section, the oil terminal facility owner or operator shall report that failure to the department by telephone or facsimile.

(d) Verification and entry on the certification log form referred to under (b) of this section is required for each separate loading or unloading operation of a vessel at an oil terminal facility.

Form maybe mailed,e-mailed, or fax to the Department.

Mailing address: ADEC/PPR
555 Cordova St
Anchorage, AK99501

fax number: (907) 269-7687

Email: DECSPARC-PLAN@alaska.gov



Juneau: dec.spar.seregion.spills@alaska.gov

[illegible]



PETRO MARINE SERVICES A HARBOR ENTERPRISES COMPANY

DECLARATION OF INSPECTION PRIOR TO BULK CARGO TRANSFER

START OF TRANSFER

VESSELS:

DATE

TRANSFER
FACILITY:

LOCATION:

The following list refers to requirements set forth in detail in 33 CFR 156.150 and 46 CFR 35.35-30 (printed on reverse). the spaces adjacent to items on the list are provided to indicate that the detailed requirement has been met.

	DELIVERER	RECEIVER
1. Communication System / Language Fluency. (156.120 (M) (P)) System tested.		
2. Warning Signs and red Warning Signals. (35.35-30)		
3. Vessels Moorings. (156.120 (a))		
4. Transfer System Alignment. (156.120 (d))		
5. Transfer System; unused components. (156.120 (c))		
6. Transfer System; fixed piping. (156.120 (f))		
7. Overboard Discharges / Sea Suction Valves (156.120 (g))		
8. Hoses or Loading Arms condition. (156.120 (h) (156.170))		
9. Hoses: length and support. (156.120 (b) (c))		
10. Connections. (156.130)		
11. Discharge Containment System. (156.120 (j) (l) Drain Holes closed.		
12. Scuppers or Drains. (156.120 (k))		
13. Emergency Shutdown. (156.120 (n))		
14. Repair Work Authorization. (35.35-30)		
15. Boiler and Galley Fires Safety. (35.35-30)		
16. Fires or Open Flames. (35.35-30)		
17. Lighting (sunset to sunrise). (156.120 (t))		
18. Safe Smoking Spaces. (35.35-30)		
19. Spill and Emergency shutdown procedures. (156.120 (q))		
20. Sufficient Personnel. (156.120 (o) (s))		
21. Transfer Conference. (156.120 (q))		
22. Agreement to begin transfer. (156.120 (r))		
23. Vessel. Have all fuel tanks been sounded or visually checked prior to transfer:		

I DO CERTIFY THAT I HAVE PERSONALLY INSPECTED THIS FACILITY OR VESSEL WITH REFERENCE TO THE REQUIREMENTS SET FORTH IN SECTION 35.35-30 AND THAT OPPOSITE EACH OF THEM I HAVE INDICATED THAT THE REGULATIONS HAVE BEEN COMPLIED WITH.

RECEIVING UNIT	DELIVERING UNIT	
Person in Charge	Person in Charge	
Title	Title	
Time and Date	Time and Date	Time Completed

P49 Spill Response Equipment Inventory

This form is completed semi-annually and retained for 5 years.

Juneau Terminal Response Equipment

Quantity	Description	Location	Comments
Containment			
1,000 feet	Kepner Boom, inside waters to 3 ft.	Juneau Warehouse	
2	Boom tow bridles with tow line	Juneau Warehouse	
2	Anchor buoy system, 30 lb.	Juneau Warehouse	
4	Boom lights	Juneau Warehouse	
4-5 gal	Boom/equip. Cleaner	Juneau Warehouse	
1	Boom repair kit	Juneau Warehouse	
Recovery			
1	Skim-Pak 4200 (EDRC 228 gal/hr) Skimmer System	Juneau Warehouse	
2	Yanmar Series L 2S5 2" Diesel Pump (185 gpm)	Juneau Warehouse	
4	Suction Hoses (2" x 20')	Juneau Warehouse	
4	Discharge Hoses (2" x 50')	Juneau Warehouse	
1	Fire/Wash Hose (1-½")	Juneau Warehouse	
10 Bales	Bales sorbent pads, 100/bale	Juneau Warehouse	
12 Bales	Sorbent Sweeps 18"x100'/bale	Juneau Warehouse	
16	Sorbent Boom 8"x10' w/ rope	Juneau Warehouse	
3 Rolls	Sorbent Roll 38"x144'/roll	Juneau Warehouse	
Temporary Storage & Transfer			
1	Homelite Trash Pump 2" M192 intrinsically (192 gpm)	Juneau Warehouse	
1	Dimas Transfer Pump (80 gpm)	Juneau Warehouse	
1	Diaphragm Pump 2" M30 (30 gpm)	Juneau Warehouse	
4	Hand Pumps ¾" (15 gpm)	Juneau Warehouse	
3	550-gallon Tanks	Juneau Warehouse	
2	1,000-gallon Tanks	Juneau Warehouse	
50	Drums close-top (55 gal)	Juneau Warehouse	
10	Drums open-top (55 gal)	Juneau Warehouse	
2	Overdrums (95 gal)	Juneau Warehouse	

Juneau Terminal Response Equipment

Quantity	Description	Location	Comments
4 Rolls	30-gal Disposable Bags 50/roll	Juneau Warehouse	
3	Containers (40' Connex)	Juneau Warehouse	
Utility Vehicles			
1	Pickup Truck (Chevy ¾ ton)	Juneau Warehouse	
1	Pickup Truck (GMC 1 ton flatbed)	Juneau Warehouse	
2	2,000-gal Tank Truck (delivery & suction)	Juneau Warehouse	
2	2,600-gal Tank Truck (delivery & suction)	Juneau Warehouse	
2	2,900-gal Tank Truck (delivery & suction)	Juneau Warehouse	
1	4,300-gal Tank Truck (suction)	Juneau Warehouse	
1	2,790-gal Tank Truck	Juneau Warehouse	
1	Flatbed with snowplow	Juneau Warehouse	
2	Bobcat Loaders W/ Buckets and Forks (M-160 & M-753)	Juneau Warehouse	
Vessels			
1	18' Landing Craft 115 HP	Juneau Warehouse	
2	Boat Trailers	Juneau Warehouse	
Miscellaneous			
1	VHF Motorola Base Station	Juneau Warehouse	
7	VHF Motorola Radios	1 in each truck	
2	Portable Maxon Radios (5-watt)	Juneau Warehouse	
2	Portable Icon Radios (3-watt)	Juneau Warehouse	
6	Goggles	Juneau Warehouse	
3	Single Filter Respirators	Juneau Warehouse	
4	Life Vests	Juneau Warehouse	
1	Gas Detector (Industrial Scientific, MX6 iBrid)	Juneau Warehouse	
10	First Aid Kit	Juneau Warehouse	
16	Fire Extinguishers	Juneau Warehouse	
1	Portable Light Stand (Construction Electrical Products, 2,000 watt)	Juneau Warehouse	

Juneau Terminal Response Equipment

Quantity	Description	Location	Comments
3	Lantern Flashlights	Juneau Warehouse	
3	Shovel	Juneau Warehouse	
3	Rake	Juneau Warehouse	
3	Pitchfork	Juneau Warehouse	
2	Swede Saw	Juneau Warehouse	
2	Double Blade Axe	Juneau Warehouse	
2	Sledgehammer	Juneau Warehouse	
3	Ice Chipper/Pry Bar	Juneau Warehouse	
1	Maul	Juneau Warehouse	

I certify that the above equipment was inspected for condition and operability. Any maintenance or replacement requirements are noted above.

Inspector

Date

P49 Spill Response Equipment Inventory

This form is completed semi-annually and retained for 5 years.

Douglas Island Terminal Response Equipment

Quantity	Description	Location	Comments
Containment			
500 ft.	Kepner Sea Curtain BHD 61208 EF (8x12)	Trailer at Warehouse	
600 ft.	Kepner Sea Curtain BHD 61208 EF (8x12)	On trailer at Warehouse	
600 ft.	Versa Tech ZOOM BOOM (8x12)	Box on top of container	
200 ft.	Sorbent boom	Response container	
12	Anchors w/ 200' rope	Response container	
6	Anchor buoys w/ 100' rope	Response container	
Recovery			
1	Skim-Pak 4300-SH Skimmer (EDRC: 648 bbl/day) with float Loadstar 2" Marine Diesel Pump	Marina	
1	Compressor, 20 CFM @100PSI	Warehouse	
100	Bales sorbent pads, 100/bale	Response container & Warehouse	
30	Rolls sorbent material	Response container & Warehouse	
6	Sorbent sweeps	Response container	
1	1 ½ inch air driven pump	Response container	
1	2 inch 5hp Centrifugal Pump (116 gpm)	Foam Shed	
100 ft.	1 ½ inch hose	Foam Shed	
Temporary storage			
5	4,700 gal tank truck	Yard	
3	5,300 gal. trailer pups	Yard	
Utility Vehicles			
1	One ton flatbed truck	Yard	
1	Half ton pick-up	Yard	
1	¾ Ton Truck	Yard	
Vessels			
1	18 ft. aluminum skiff w/140 HP outboard	Fuel float	

Douglas Island Terminal Response Equipment

Quantity	Description	Location	Comments
1	Boat trailer	Yard	
Miscellaneous			
6	Assorted pipe leak-stop sleeves, 2 – 6 inch	Foam Shed	

I certify that the above equipment was inspected for condition and operability. Any maintenance or replacement requirements are noted above.

Inspector

Date

ANNUAL NPREP TRAINING & DRILLS DOCUMENTATION

This form must be retained for five years.

1. QUALIFIED INDIVIDUAL NOTIFICATION DRILL (QUARTERLY)

Contact made with Q.I. or Alternate Q.I.

Date	Time	Person Initiating Call	QI Contacted

2. MANAGEMENT TEAM TABLETOP EXERCISE (ANNUAL)

Brief Description of Spill Response Exercise:

Date	Time	Participants

3. EQUIPMENT DEPLOYMENT EXERCISE (SEMI-ANNUAL)

Date:

Equipment/Personnel Deployed:

Date:

Equipment/Personnel Deployed:

4. UNANNOUNCED EXERCISE (ANNUAL)

Was one of the above exercises unannounced?

_____ Yes, date unannounced exercise performed: _____

_____ No, describe your unannounced drill and date performed here:

PETRO 49, INC. JUNEAU AND DOUGLAS ISLAND TERMINALS

DISCHARGE PREVENTION MEETING LOG

Date: _____

Attendees:	<u>Printed Name</u>	<u>Signature</u>

Subject/Issue Identified	Required Action

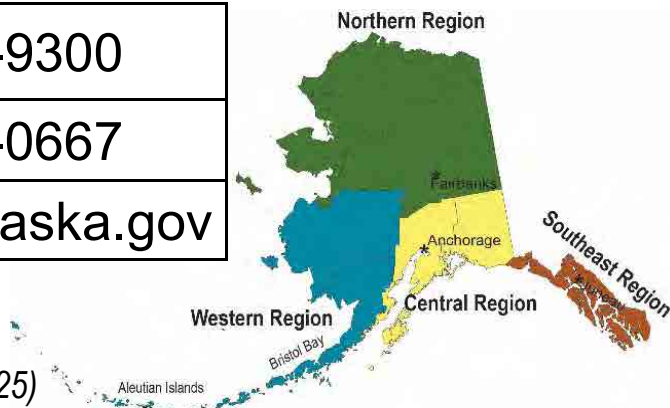
RESPONSE FORMS CHECKLIST

Notification Forms

- ☐ ADEC Spill Reporting Placard
- ☐ Oil and Hazardous Substances Spill Notification Form
- ☐ Alaska Cultural Resource Permit Application
- ☐ Oil Spill Decanting Application/Authorization Form

Report Oil and Hazardous Substance Spills

TOLL-FREE	1-800-478-9300
INTERNATIONAL	1-907-269-0667
ONLINE	ReportSpills.alaska.gov



It's Required by Alaska Law!

(AS 46.03.755, AS 46.03.450, 18 AAC 75.300, 18 AAC 75.325)

Oil and Petroleum Product Reporting

Spills to Water

- Any amount spilled to water must be reported **immediately**.

Spills to Land

- Spills in **excess of 55 gallons** must be reported **immediately**.
- Spills in **excess of 10 gallons but less than 55 gallons** must be reported within 48 hours.
- Facilities shall maintain a spill log and report a record of oil discharges from **1 to 10 gallons** monthly.

Spills to Impermeable Secondary Containment

- Spills in **excess of 55 gallons** must be reported within 48 hours.

Hazardous Substance Reporting

Any hazardous substance spill, other than oil, must be reported **immediately**.

Underground Storage Tank (UST)* Reporting

You must report a suspected below ground release from a UST system, in any amount, within 24 hours. (18 AAC 78.212)

If a release is suspected the owner or operator of a UST shall investigate the UST site and shall report to the UST Unit within the period specified. (18 AAC 78.200)

Contact us: (907) 465-5250

* Regulated UST as defined in AS 46.03.450(8)



Alaska Department of Environmental
Conservation
Division of Spill Prevention and Response
<https://spills.alaska.gov>

Revised 10/10/2022



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION FORM

ADEC USE ONLY

ADEC SPILL #:	ADEC FILE #:	ADEC LC:
---------------	--------------	----------

PERSON REPORTING:		PHONE NUMBER:		REPORTED HOW? (ADEC USE ONLY) ☐ Phone ☐ Fax ☐ PERS ☐ E-mail	
DATE/TIME OF SPILL:		DATE/TIME DISCOVERED:		DATE/TIME REPORTED TO ADEC:	
INCIDENT LOCATION/ADDRESS:		DATUM: ☐ NAD27 ☐ NAD83 ☐ WGS84 ☐ Other _____		PRODUCT SPILLED:	
		LAT.			
		LONG.			
QUANTITY SPILLED: ☐ gallons ☐ pounds	QUANTITY CONTAINED: ☐ gallons ☐ pounds		QUANTITY RECOVERED: ☐ gallons ☐ pounds		QUANTITY DISPOSED: ☐ gallons ☐ pounds
POTENTIAL RESPONSIBLE PARTY:		OTHER PRP, IF ANY:		VESSEL NAME:	
Name/Business:					
Mailing Address:				VESSEL NUMBER:	
Contact Name:				> 400 GROSS TON VESSEL:	
Contact Number:				☐ Yes ☐ No	
SOURCE OF SPILL:				CAUSE CLASSIFICATION:	
CAUSE OF SPILL:				☐ Accident ☐ Human Factors ☐ Structural/Mechanical ☐ Other	
☐ Under Investigation					
CLEANUP ACTIONS:					
DISPOSAL METHODS AND LOCATION:					
AFFECTED AREA SIZE:		SURFACE TYPE: (gravel, asphalt, name of river etc.)		RESOURCES AFFECTED/THREATENED: (Water sources, wildlife, wells, etc.)	
COMMENTS:					

ADEC USE ONLY

SPILL NAME:		NAME OF DEC STAFF RESPONDING:		C-PLAN MGR NOTIFIED? ☐ Yes ☐ No	
DEC RESPONSE: ☐ Phone follow-up ☐ Field visit ☐ Took Report		CASELOAD CODE: ☐ First and Final ☐ Open/No LC ☐ LC Assigned		CLEANUP CLOSURE ACTION: ☐ NFA ☐ Monitoring ☐ Transferred to CS or STP	
COMMENTS:		Status of Case: ☐ Open ☐ Closed DATE CASE CLOSED:			
REPORT PREPARED BY:					
DATE:					

State Cultural Resources Investigation Permit (SCRIP) Application**Alaska Department of Natural Resources, Office of History and Archaeology**

550 W. 7th Ave., Suite 1310 Anchorage, AK 99501-3565

*Questions about State Permits should be directed to the State Archaeologist
either by email at oha.permits@alaska.gov or by phone at (907) 269-8728.*

Permit #: _____

Date Received: _____

OHA USE

A. Applicant Section

1. Applicant: _____ 2. Date Submitted: _____

3. Institutional Affiliation: _____

4. Contact Information: Address: _____

Phone: _____ Email: _____

5. Contracting Agency: _____

6. Project Name: _____

7. Field Supervisor: _____

8. Brief Description of Project Area: _____

9. Dates of Proposed Work: _____ to _____ 10. Acres to be Investigated: _____

11. MTRS: (ex. S021N005W|3-5|10) _____

12. Permit Type: _____ If other, please specify: _____

13. Proposed Artifact Repository: _____ Curation Agreement: _____

B. Applicant Signature

By signing this document, the applicant confirms that they have read and agreed to comply with the provisions AS 41.35.080 and 11 AAC 16.020 - 16.090, as well as the Instructions and Stipulations for the Alaska SCRIP.

1. Signature of Applicant: _____ 2. Date: _____

3. Signature of Field Supervisor: _____ 4. Date: _____

C. Agency Land Manager Authorization

1. Land Manager (Print): _____ 2. Agency: _____

3. Land Manager (Sign): _____ 4. Date: _____

D. Office of History and Archaeology Authorization

1. Signature of DPOR Director: _____ 2. Date: _____

3. Expiration Date of Permit: _____

STATE CULTURAL RESOURCE INVESTIGATION PERMIT Stipulations and Conditions

Stipulation Instructions can be found in OHA's *SCRIP STIPULATION INSTRUCTIONS*.
Instructions therein are not discretionary, are subject to update, and should be reviewed periodically.

The issuance of State Cultural Resource Investigation Permits (SCRIPs) is required for all cultural resource investigations (surveys) on lands owned or managed by any and all State of Alaska agencies, political subdivisions, or entities (collectively referred to herein as "state lands") is authorized under [AS 41.35.080](#) and [11 AAC 16.030-.900](#).

Paleontological resources (fossils) also require a SCRIP, as they are included as an archaeological site under [AS 41.35.230\(2\)](#), [AS 41.35.010 – 41.35.230](#) (statutes) and [11 AAC 16.010 – 16.900](#) (regulations) establish the legal framework within which SCRIPs are issued.

The Alaska Office of History and Archaeology (OHA) requires annual SCRIP applications and issues one-year SCRIPs for the following:

1. Public construction (cultural resource management) projects; or
2. Where the applicant is in some way being paid for their time or product, for example an instructor being paid by a university to conduct a field school.

OHA may issue a SCRIP for up to three years for projects conducted for research purposes where no remuneration is being received for time or product, and which shall be conducted over multiple years by the same investigator. Grants are not considered remuneration for purposes of this SCRIP.

SCRIPs issued for field investigations on state lands are subject to the following conditions:

1. Permit Applications:

- A. A research design shall be attached to the permit application.
- B. The permittee shall meet the professional qualification standards of [11 AAC 16.040](#) for work on state lands. However, for projects undertaken in response to the National Historic Preservation Act, the permittee must also meet the standards established in [43 CFR 7.8](#) and the Secretary of the Interior's Standards and Guidelines, [48 FR 44738-44739](#).
- C. It is the applicant's responsibility to determine land ownership for the area to be surveyed, and list in the research design the Meridian/Township/Range/Section (MTRS's) for each state land managing agency / entity in the survey area.
- D. Applicants shall allow OHA at least 30 days to process SCRIP applications.
- E. The permittee shall fully indemnify the state land managing entity and the OHA.

2. Permit Issuance and Termination:

- A. OHA shall issue SCRIPs to only one permittee (applicant) per SCRIP. The SCRIP is not transferrable.
- B. Applicants may only apply for a SCRIP after securing a written contract for their project, if applicable. If removed from the permitted project, the permittee forfeits their SCRIP.
- C. A SCRIP may be amended by [request](#) to account for deviations from the signed SCRIP application and research design. Amendments will only be issued at the discretion of OHA.
- D. OHA may terminate a SCRIP if the permittee fails to comply with the terms of the SCRIP and stipulations, or with other applicable laws, statutes, and regulations.
- E. SCRIP eligibility is contingent upon the satisfactory completion of prior SCRIPs. Applicants are not eligible for further SCRIPs until the requirements of SCRIPs from previous field seasons are satisfied.

3. Permit Fieldwork:

- A. Survey methodology shall be explicitly defined in the research design and justified in the report: in-field “discretion of the archaeologist” alone is not an acceptable survey or testing methodology.
- B. The permittee shall ensure that the Field Supervisor is qualified, knowledgeable, and aware of the Permitted research design and SCRIP Stipulations.
- C. If no Field Supervisor is assigned at time of SCRIP application, the permittee shall submit OHA’s Field Supervisor form upon assigning a Field Supervisor, prior to conducting fieldwork.
- D. Large projects fielding multiple crews may be required as a special permit condition to report multiple field supervisors, using OHA’s Field Supervisor Form.
- E. OHA expects subsurface testing shall be conducted.
 - 1) Subsurface shovel tests shall measure 50 x 50 cm square.
 - 2) All excavated materials will be screened. 1/8-inch screen is considered standard. If the applicant chooses to use 1/4-inch screens rather than 1/8-inch, it shall be justified in the research design.
 - 3) Artifacts recovered through subsurface testing shall be collected, analyzed, and curated.
 - 4) If the Field Supervisor determines subsurface testing is not warranted, the survey report shall provide an explanation and images showing why subsurface testing was not appropriate.
- F. SCRIP applications for work that includes any ground disturbing activities and/or the collection of archaeological or paleontological materials shall be accompanied by a Curation Agreement.
- G. In the event that human remains are discovered, the permittee shall cease work that would further disturb the remains and immediately contact the appropriate state agencies as required by [AS 12.65.5](#).
- H. Issuance of a SCRIP in no way absolves the permittee from complying with other laws and regulations that may apply.
- I. Frozen ground and low light present significant challenges to fieldwork. Any project anticipating work in these conditions shall consult with OHA prior to conducting fieldwork or monitoring.
- J. OHA personnel may visit SCRIP-permitted surveys or excavations at any time, as per [11 AAC 16.090](#).

4. Permit Reporting:

- A. Reports shall be consistent with *SOI’s Standards and Guidelines for Archaeology and Historic Preservation* as well as the *Alaska Historic Preservation Act*. If the report does not meet these standards, permittee shall revise the report for OHA approval in order to close the SCRIP.
- B. The final report is due to the [State Archaeologist](#) within six months after the completion of fieldwork. An interim report may be submitted three months after the completion of fieldwork. For multi-year SCRIPs, annual reports are required in addition to a final report.
- C. The permittee shall ensure that Alaska Heritage Resources Survey ([AHRS](#)) records are submitted to the [AHRS Manager](#) for sites investigated under the SCRIP.
- D. OHA will make submitted reports available to cultural resource professionals, land managers, and others authorized by AHRS user agreements to access OHA records.

E. Applicant Signature: SCRIP Stipulations

By signing this document, the applicant confirms that they have read and agreed to comply with the provisions AS 41.35.080 and 11 AAC 16.020 - 16.090., as well as the Instructions and Stipulations for the Alaska SCRIP.

1. Signature of Applicant: _____ 2. Date: _____

UNIFIED COMMAND

Oil Spill Decanting Application/Authorization Form

Incident Name: _____

Responsible Party: _____

Date(s) of Approval Requested: _____

Demonstration of Need for Decanting:

Location and Description of Proposed Decanting Operation:

RP IC Signature

DATE

Decanting is authorized with the intent to maximize storage capacity for recovered oil and expedite cleanup. If recovered fluids can be adequately managed using available storage, on-site treatment, or transport to a treatment facility without impeding ongoing oil recovery, recovered water shall not be decanted.

The decanting operation must meet the following conditions:

1. Decanted water must not cause a film, sheen or discoloration on the surface or floor of the waterbody or adjoining shorelines. Decanting must cease if oil is observed in water being discharged.
2. Operators must maintain continuous control over the decanting process to prevent discharge of concentrated oil.
3. Decanted water must be discharged within the collection boom or area, vessel collection well, recovery belt, weir area, or directly in front of a recovery system, unless approved otherwise.
4. Where decanted water will not pass through an oil/water separator prior to discharge, tanks must be allowed to settle without addition of fluids for a minimum time of _____ to allow separation before decanting commences.
5. The RP shall record the following data for all decanting operations: location of the decanting, time decanting started, time decanting stopped and decanting pump rates.
6. DEC staff shall have access to decanting operations in order to evaluate effectiveness and collect samples if needed.
7. Additional conditions (continued on reverse, if necessary):

SOSC Signature

DATE

FOSC Signature

DATE

Note: The RP may make a verbal request and receive verbal approval for decanting from the OSC or their designee, but a written application must follow as soon as possible.

APPENDIX B

INCIDENT COMMAND SYSTEM

ICS Fillable Forms

To access FEMA's ICS Fillable forms online, visit [Emergency Management Institute | ICS Fillable Forms \(fema.gov\)](https://www.fema.gov/emergency-managment-institute/ics-fillable-forms).

Modified ICS 208 Form
Site Specific Safety Plan

This form to be completed by the designated Safety Officer.

INCIDENT DESCRIPTION:

Date: _____ Location: _____

Vessel Involved? Yes/No _____ Vessel Name: _____

Product Spilled: _____ Est. Volume Spilled: _____

Wind Direction/Speed _____ Temperature: _____

Weather Conditions: _____

(rain, snow, visibility, etc.) _____

Surrounding Population: _____ industrial _____ residential _____ unpop. _____ other

Topography: _____

rocky, sandy/gravel, beach, cliffs, marsh/tundra, etc.

Immediate danger to life or health (IDLH):

1. Suspected hazards on site (Check all that are applicable):

_____ Fire & explosion	_____ Drowning (on water activities)
_____ Inhalation	_____ Confined space
_____ Skin contact & absorption	_____ Noise
_____ Cold/heat exposure	

2. Initial monitoring results (to be performed by Local Fire Department)

Perform for each area of a spill.

Hazard	Detection Level	Frequency hourly/daily	Time
Combustible gas			
Oxygen			
Toxic compounds			
Benzene			
Toluene			
Xylenes			
Total Hydrocarbons			

3. Recommended personnel protection

The Incident Commander and Safety Officer will work with a PRAC representative to ensure that the appropriate level of PPE is selected and available for the incident and job function.

Job Function:	_____	Job Function:	_____
Level of PPE:	_____	Level of PPE:	_____

Job Function:	_____	Job Function:	_____
Level of PPE:	_____	Level of PPE:	_____

NO EMPLOYEE OR CONTRACTOR MAY ENTER AN AREA THAT REQUIRES LEVEL A, B OR LEVEL C PROTECTION UNLESS HE/SHE IS TRAINED IN ITS USE, AND MEDICALLY CERTIFIED AND FIT TESTED FOR A RESPIRATOR.

IF YOU CANNOT DETERMINE THAT IT IS SAFE TO RESPOND, DO NOT RESPOND.

Personal Protective Equipment

Vapors, gases, and particulates from hazardous substance response activities place response personnel at risk. For this reason, response personnel must wear appropriate personal protective clothing and equipment whenever they are near the site. There are four levels of personal protective equipment.

Level A protection is required when the greatest potential for exposure to hazards exists, and when the greatest level of skin, respiratory, and eye protection is required. Examples of Level A clothing and equipment include:

- positive pressure, full face-piece self contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA;
- totally encapsulated chemical- and vapor-protective suit;
- inner and outer chemical-resistant gloves; and
- disposable protective suit, gloves, and boots.

Level B protection is required under circumstances requiring the highest level of respiratory protection, with lesser level of skin protection. Examples of Level B protection include:

- positive pressure, full face-piece self contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA;
- inner and outer chemical-resistant gloves;
- face shield;
- hooded chemical resistant clothing;
- coveralls; and
- outer chemical-resistant boots.

Level C protection is required when the concentration and type of airborne substances is known and the criteria for using air purifying respirators is met. Typical Level C equipment includes:

- full-face or half-face air purifying respirators;
- inner and outer chemical-resistant gloves;
- hard hat;
- escape mask; and
- disposable chemical-resistant outer boots.

Level D protection is the minimum protection required. Level D protection may be sufficient when no contaminants are present or work operations preclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Appropriate Level D protective equipment may include:

- Oil resistant gloves;
- coveralls or raingear;
- safety glasses;
- face shield; and

- chemical-resistant, steel-toe boots or shoes.

While these are general guidelines for typical equipment to be used in certain circumstances, other combinations of protective equipment may be more appropriate, depending upon specific site characteristics.

General Safe Work Practices *Summarized from Annex H of the Unified Plan*

Buddy System: The buddy system will be observed inside the Work Area. Personnel must work within sight of their assigned partner at all times. Partners will be assigned by the Safety Officer.

Fires: The Safety Officer will make sure the appropriate class of fire extinguisher is available at each response site with an identified fire hazard.

Lighting: Fixed or portable lighting will be maintained to provide sufficient illumination for dark areas or for work during dusk/dawn, and work after sunset.

Slippery Rocks/Surfaces: All personnel will wear chemical resistant safety boots with steel toe/shank and textured bottoms. Brief personnel to keep soles free of excess oil.

Slip-Trip-Fall Hazards: Brief personnel to be wary of tripping hazards.

Work Near/On Water: All personnel working in boats; on docks; or generally within 10 feet of water deeper than 3 feet will wear Coast Guard approved personal floatation devices (PFD's).

Cold/Heat Stress: Workers will be provided with adequate warm clothing, rest opportunities, exposure protection. Fluids (warm or cold based on conditions) will be provided at rest stations, and be available to personnel at all times.

Noise Level: Hearing protection will be used in high noise areas, which will be designated by the Safety Officer.

Drum Handling: Manual lifting and handling of drums and other collection containers will be kept to a minimum. To the extent possible, mechanical devices, drum slings, or other devices will be used.

Confined Spaces: If a confined space is identified during a spill response, the Safety Officer will ensure that a confined space work authorization checklist will be utilized, and that only trained and experienced personnel will enter the identified confined space.

Incident Commander (IC): The IC is the general manager of the oil spill response activities. These management functions include coordination and co-development of overall strategic goals with the FOSC and SOSC in the Unified Command. The IC assigns Command Staff personnel to account for safety, legal, public information (media), governmental liaison, and administrative support activities, as required.

The following is a task checklist for the Incident Commander:

- ☐ Refer to the Immediate Actions Checklist in Section 1.1.
- ☐ Obtain the initial oil spill incident briefing from the Operations Chief.
- ☐ Review the initial actions and advise the Operations Chief of additional actions to be taken.
- ☐ Activate additional management personnel and instruct to report to the Operational Command Center.
- ☐ Notify the Tier II response contractor, the Primary Response Action Contractor.
- ☐ Take control of the oil spill activities and assume responsibility for overall management
- ☐ Notify appropriate government officials (See Section 1.3).
- ☐ Assess the oil spill and, with the FOSC and SOSC, develop overall strategic goals for the response.
- ☐ Brief government officials on status of oil spill response activities.
- ☐ Approve safety plans developed by the Safety Officer.
- ☐ Conduct the initial briefing with the ICS and assign duties to personnel. Activate additional elements of the ICS, as needed, through the Section Chiefs.
- ☐ Establish and maintain a firm schedule of communications with the Forward Command Center at the Facility.
- ☐ Verify that planning meetings are conducted for each planning period.
- ☐ Review and authorize Incident Action Plans.
- ☐ Assist in the development of press releases and authorize as appropriate. Serve as a representative during major press briefings and public meetings.
- ☐ Delegate spending authorities and approve major expenditures.
- ☐ Coordinate with the FOSC and SOSC to declare response completion dates.
- ☐ Prepare summary reports, coordinate follow-up documentation, and participate in evaluations and critiques.

Deputy Incident Commander: A Deputy IC may be assigned in a large event to assist the IC in performing the necessary duties. The IC should identify and delegate as many of the operational and support management tasks to the Deputy IC as is possible.

The Deputy IC's specific duties are delegated to him directly by the IC. The Deputy IC may be requested to manage any of the IC's duties, including, but not limited to, direct oversight of the Section Chiefs and activities. A checklist for the Deputy IC is as follows:

- ☐ Obtain briefings from the IC.
- ☐ Ensure that Section Chiefs and the Command Staff have been notified and are assembled at the Emergency Operations Center.
- ☐ Review the Incident Commander's responsibilities.
- ☐ Assume responsibility and control for those components of the oil spill incident management as directed or authorized by the IC.
- ☐ Ensure that Section Chiefs and Command Staff understand their responsibilities and accomplish tasks in a timely manner.
- ☐ Lead manager for critical elements of the response.

Safety Officer: Responsible for establishing the appropriate and required safety standards for the response operations. He is also responsible for the development of safety plans and for ensuring that standards and plans are being followed through on-site inspections. A checklist for the Safety Officer is as follows:

- ☐ Obtain briefing from the Operations Chief.
- ☐ Identify hazardous situations associated with the incident and recommend appropriate safety equipment.
- ☐ Develop the general safety plan for response operations (See Section 1.3).
- ☐ Ensure that all personnel are informed of safety requirements in accordance with the safety plan.
- ☐ Maintain safety surveillance of all activities through on-site inspections and recommend measures to mitigate unsafe conditions.
- ☐ Exercise authority to stop and prevent unsafe acts.
- ☐ Investigate accidents that have occurred within the incident area.
- ☐ Coordinate activities and capabilities with medical staff.

Public Information Officer: Responsible for the formulation and release of information about the oil spill incident to the news media, non-governmental organizations, and other interested parties. The Public Information Officer reports directly to the Incident Commander. A checklist for the Public Information Officer is as follows:

- ☐ Obtain briefing from the IC.
- ☐ Establish a single authorized source of information for the media.
- ☐ Arrange for necessary media briefing facilities and establish a Press Room at the Command Center.
- ☐ Obtain ongoing status of spill response activities and status of efforts.
- ☐ Develop plans and procedures for advising the public on the progress of the cleanup.
- ☐ Prepare an initial press release as soon as possible and submit to the Incident Commander for approval.
- ☐ Develop, organize and schedule regular press briefings at the Press Room.
- ☐ Prepare periodic press releases for approval and release by the Incident Commander.
- ☐ Maintain a close working relationship with all news media, governmental agencies, conservation groups, and civic public organizations.
- ☐ Attend meetings to update information released.
- ☐ Respond to special requests for information.
- ☐ Assess published media information (radio, television, and newspaper articles) and brief the Incident Commander.

Legal Advisor/Counsel: Responsible for providing legal advice to the Incident Commander on all aspects of the oil spill. The Legal Advisor is also responsible for monitoring the spill, notifying the appropriate insurance representatives, investigating potential claims, and settling claims. The legal officer must be familiar with the Facility Response Plan. The Legal Advisor's checklist is as follows:

- ☐ Obtain a briefing from the IC.
- ☐ Be familiar with all aspects of the spill in anticipation of legal actions and take actions to protect the company's interests.
- ☐ Provide and give legal approval of oil spill reports for the government agencies prepared by the IC or his designee.
- ☐ Determine the legal responsibility for the incident as quickly as possible. If the facility operator/owner is found to be not responsible for the spill, notify the responsible party of the spill and obtain authorization to act as the agent for the responsible party. In this case, act as liaison between facility operator/owner and the responsible party.
- ☐ Ensure that the incident cause and amount of oil spilled is adequately investigated.
- ☐ Collect and maintain legally defensible investigative data and information.
- ☐ Ensure information that may be relevant to the defense and/or settlement of future claims is gathered and preserved. Advise the IC of the necessary documentation.
- ☐ Provide legal advice in matters related to insurance liabilities.
- ☐ Ensure that cleanup contracts and agreements are in sound legal form and in compliance with law, rules, and regulations.
- ☐ Maintain contact with insurers and develop plans for effective investigation and handling of insurance claims.
- ☐ Approve legal format of contracts and agreements established during the response not executed in accordance with the standard facility operator/owner format.
- ☐ Consult with the Incident Commander on matters related to labor disputes, sabotage, arson, and any illegal acts against facility operator/owner.
- ☐ Assist in obtaining permits and resolving permit issues such as right-of-way access, dispersant use, in-situ burning, and waste disposal.
- ☐ Review and approve press releases.
- ☐ Retain outside counsel, if necessary.
- ☐ Advise the Environmental Unit Leader concerning compliance with environmental laws, rules, and regulations.

Operations Section Chief: Develops, activates, and supervises operational elements of the oil spill response effort. The Plant Manager is assigned as the initial Operations Chief. The Operations Section Chief provides on scene coordination for source control and repair and directs containment, control, recovery, and protection operations. The Operations Section Chief also advises the IC, oversees all cleanup activities, and ensures that these activities are carried out safely and effectively.

- ☐ Initial Actions – See Checklist in Section 1.1. Develop immediate tactical plans.
- ☐ Organize arriving personnel into teams – assign group leaders. Assign deployment and operations tasks to operations groups. Supervise Operations.
- ☐ Evaluate the effectiveness of operations. Adjust tactical plans as appropriate and necessary. Monitor contractors' work and review daily performance reports to ensure accuracy.
- ☐ Ensure that appropriate government approvals have been obtained by the Environmental Group prior to any non-mechanical response operations that may be instituted.
- ☐ Maintain the highest level of safety awareness in all operations.
- ☐ Establish staging areas at the Operational Facility for any arriving Tier II equipment and provide transportation equipment and personnel for moving the equipment to the deployment location. Determine additional resource needs for oil spill containment, exclusion, and cleanup operations and request additional resources from the Command Center, as needed.
- ☐ Report information about activities, events, and actions to the Incident Commander.
- ☐ Identify resources not needed for operations so that they may be demobilized.
- ☐ Coordinate temporary storage for recovered oil and oily solid wastes.
- ☐ Provide a shoreline cleanup operations team member as representative on the SCAT Team. Conduct shoreline cleanup operations.

Onshore Operations and Support Unit Leader: Responsible for supervising onshore response activities. A checklist for the Onshore Operations and Support Unit Leader is as follows:

- ☐ Obtain briefing and instructions from the Operations Chief (Lead Fuels Operator).
- ☐ Outfit personnel with proper safety gear and personnel protective equipment.
- ☐ Identify and collect transportation equipment (trucks, cranes, forklifts, etc.).
- ☐ Obtain immediate response equipment in accordance with immediate tactical plan and transport from storage location to deployment location.
- ☐ With the Offshore Group, deploy equipment to water.
- ☐ Maintain shoreside aspect of entrapment and recovery operations.
- ☐ Transport arriving Tier II equipment to deployment locations and deploy with Offshore Group. Prepare and operate recovered oil transfer operations from temporary storage containers. Transport recovered oil to temporary storage tankage as necessary with tank trucks or through facility pipe systems.
- ☐ Ensure the safety of field personnel involved in onshore response activities.
- ☐ Work with the Environmental Unit to conduct shoreline cleanup assessment team surveys and to develop detailed shoreline cleanup plans.
- ☐ Provide the Operations Chief with information on the services, resources, and manpower required to support onshore response operations.
- ☐ Conduct shoreline cleanup operations.
- ☐ At conclusion of spill response, establish decontamination group.

Offshore Cleanup Unit Leader: Responsible for on-water activities including operation of offshore containment, control and recovery operations and on-water support of nearshore protection and entrapment operations. A checklist for the Offshore Cleanup Unit Leader is as follows:

- ☐ Obtain briefing and instructions from the Operations Chief (Plant Manager).
- ☐ Outfit personnel with proper safety gear and personnel protective equipment.
- ☐ Transport and deploy offshore response equipment.
- ☐ Operate vessels and conduct anchor and offshore boom leg deployment operations during the establishment of entrapment and nearshore protection tactics.
- ☐ Deploy towable on-water storage devices and operate skimming systems, boom towing vessels, and concentration boom associated with offshore containment and recovery operations.
- ☐ Ensure the safety of all field personnel involved in offshore response activities.
- ☐ Coordinate activities with arriving Tier II contractor personnel and equipment.
- ☐ Provide the Operations Chief with information on the services, resources, and manpower that is required to support long-term offshore response operations.

Tier II Response Contractor: The Tier II response contractor will be provided with a list of additional response equipment, personnel, and materials that may be required to support a large oil spill response effort. For the statement of contractual terms with the Tier II state registered primary response action contractor (PRAC), please refer to Section 3.7.

A checklist for the Tier II Response Contractor is as follows:

- ☐ Assist facility operator/owner in identifying and prioritizing equipment and personnel to be utilized.
- ☐ Maintain list of resources (personnel and equipment) available in local area.
- ☐ Callout personnel, subcontractors, transportation services, and air lift capabilities as required. Arrange for air cargo flight(s) to local area as necessary.
- ☐ Prepare necessary equipment, personnel, and materials from storage as necessary and required. Transport equipment to Air Transportation Staging area.
- ☐ Assist in loading aircraft.
- ☐ Notify facility operator/owner of time of arrival of air cargo flights at local area. Receive safety briefing and tactical instructions from Operations Chief.
- ☐ Assist in offloading aircraft and transportation of equipment to deployment location.
- ☐ Assist in deployment of equipment to water.
- ☐ Provide additional support to facility operator/owner personnel as directed.
- ☐ Operate vessels and response equipment as necessary to meet tactical plans.

Decontamination & Waste Management Unit Leader: Responsible of conducting onshore decontamination of equipment and materials, as well as management of liquid and solid wastes. This group will be formed after the offshore and onshore equipment is deployed and fully operational. A checklist for the Decontamination and Waste Management Unit Leader is as follows:

- ☐ Plan and obtain necessary equipment and materials needed for decontamination of response resources.
- ☐ Prepare decontamination locations for equipment and personnel.
- ☐ Decontaminate and return equipment to storage areas.
- ☐ Prepare post-incident inventory of response equipment and supply resources.
- ☐ Establish waste management segregation practices and procedures.
- ☐ Establish temporary waste management locations for liquid and solid wastes. Permits for temporary waste management to be obtained by Environmental Group.
- ☐ Arrange for transportation of wastes to disposal/treatment location (disposal and treatment permits to be obtained by Environmental Group).

Planning Section Chief: Responsible for management of short-term and long-term planning for the oil spill response; tracking, organizing, and posting information and data on the spill response effort, and support of operations in regard to environmental issues and permits. The checklist for the Planning Chief is as follows:

- ☐ Obtain a briefing from the IC.
- ☐ Alert and brief Unit leaders on the spill and activate additional personnel and specialists as needed to support the operational needs.
- ☐ Organize the planning section at the Emergency Operations Center.
- ☐ Ascertain the nature of the spill. Work to develop trajectory and mass balance projections. Periodically revise trajectory analysis based on actual observed oil spill location and nature. Provide regular predictions on oil spill potential, resources at risk, possible hazards, and weather information.
- ☐ Establish the planning cycle with strict planning timelines for strategy, planning, and team meetings to facilitate the development of Incident Action Plans for each operational period.
- ☐ Supervise the preparation of the Incident Action Plan.
- ☐ Identify regulatory permits necessary for operations; develop and submit applications to agencies.
- ☐ Supervise collection, dissemination, and documentation of information and data by the Situation Status/Documentation Group, as well as the development and maintenance of situation status boards at the command post.
- ☐ Prepare, distribute, and document Incident Commander orders and identify organizational elements responsible for executing those orders.
- ☐ Ensure that the Facility Response Plan and Incident Action Plan are available and utilized throughout the incident.
- ☐ Plan for demobilization through the Demobilization Unit.
- ☐ Develop waste management and disposal plans.

Situation Status/Documentation Unit Leader: Responsible for collection, dissemination, and documentation of information and data on the oil spill and response efforts. The Situation Unit Leader assembles and disseminates maps detailing the size and location of the spill and other relevant features or components of the oil spill incident response. A checklist for the Situation Status/Documentation Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Planning Section Chief.
- ☐ Collect, maintain, and distribute oil spill related trajectory, surveillance, and fate data for the duration of the incident.
- ☐ Provide photographic services, maps, and situation status information as requested.
- ☐ Prepare Situation Status Reports and Emergency Operations Center status boards.
- ☐ Provide situation status information as requested by Section Chiefs.
- ☐ Establish a filing system for the incident files. Organize, maintain and store oil spill incident files in a convenient, secure location.
- ☐ Distribute copies of the file index to appropriate response personnel. Ensure that all response personnel are familiar with documentation guidelines.
- ☐ Work with Planning Section Chief to prepare the Incident Action Plan.
- ☐ Establish file duplication services for the incident and respond to file duplication requests.
- ☐ Obtain approval from Planning Section Chief prior to release of documentation.
- ☐ Duplicate and file all official forms and reports.
- ☐ Check records for completeness and accuracy prior to filing.

Resource Unit Leader: Maintains a record of the location and status of all equipment and personnel involved in the oil spill incident. The Resource Unit Leader is responsible for (1) verification that spill response resources (equipment and personnel) are properly checked in as they arrive in the local area from the Tier II contractor(s); (2) preparation and processing of response resource status change information including location of operations as the equipment and personnel is deployed and demobilized; and (3) preparation and maintenance of displays, graphs, and charts that reflect the current status of resources. A checklist for the Resource Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Planning Section Chief.
- ☐ Obtain list of equipment, supplies, and personnel ordered from Tier II contractors and other sources from Logistics Section.
- ☐ Monitor status of acquisition and mobilization of resources to local area.
- ☐ Assist in the maintenance of the Situation Status Boards in regard to resource status.
- ☐ Document the arrival of resources at the staging area.
- ☐ Receive status updates from Operations Section in regard to deployment and location of resource operations.
- ☐ Maintain master list of all resources and monitor demobilization of resources including information on resources that are decontaminated and stored at the staging area and returned resources.
- ☐ Provide situation status information as requested by Section Chiefs.

Environmental Unit Leader: Responsible for environmental issues associated with the oil spill. The Environmental Unit provides advice and recommendations on environmental aspects of the spill including mechanical response, non-mechanical response, wildlife protection, shoreline cleanup, and oily waste disposal. The Environmental Unit also identifies environmentally sensitive areas including location and nature of the sensitivity. The Environmental Unit specialists may include a wildlife specialist, spill impact and modeling personnel, trajectory specialists, permit specialists, and technical advisors.

The Environmental Unit Leader participates in planning session activities, collects area environmental information and prioritizes mitigation measures. A checklist for the Environmental Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Planning Section Chief.
- ☐ Establish staffing requirements for the Unit and assign duties to personnel.
- ☐ Collect and maintain existing and relevant environmental baseline data from the incident and potentially affected areas.
- ☐ With resource agencies (ADEC, ADFG, USFW, etc.), identify and prioritize environmentally sensitive areas for protection.
- ☐ Advise the operations section on these areas and priorities.
- ☐ Prepare Environmental Operations component of the Incident Action Plan.
- ☐ Prepare Wildlife Response Plan in accordance with the *Wildlife Protection Guidelines for Oil Spill Response in Alaska*.
- ☐ Coordinate with government agencies regarding obtaining the necessary permits, applications, and approvals.
- ☐ Ensure compliance with permit stipulations through inspections. Liaise with resource agencies regarding wildlife protection (hazing or pre-emptive capture), cleaning, and rehabilitation requirements and operations.
- ☐ Perform surveys of contaminated areas through Shoreline Cleanup and Assessment Technique (SCAT) Team surveys.
- ☐ Assist in preparing shoreline cleanup plans with the Onshore Cleanup Group.
- ☐ Assess the environmental damage to contaminated areas and potential impact of cleanup activities to support recommendation on cleanup methods through the Net Environmental Benefit Analysis (NEBA) process.
- ☐ Develop recommendations on mitigation and protection of key environmental areas and appropriate cleanup methodologies.
- ☐ Coordinate oversight of environmental monitoring activities and coordinate. Coordinate all materials and wastes analyses.
- ☐ Obtain briefings on the status of and the nature and quantity of liquid and solid waste being generated by the response operations.
- ☐ Develop and implement plans for the temporary storage and disposal of recovered oily waste and debris.

Demobilization Planning Unit Leader: Responsible for planning an orderly, safe and cost- effective demobilization of personnel and equipment. The Demobilization Planning Unit Leader will need to coordinate closely with the other incident response personnel. A checklist for the Demobilization Planning Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Planning Section Chief.
- ☐ Develop and obtain workspace, equipment, and supplies required for demobilization.
- ☐ Maintain contact with Section Chiefs to ascertain the timing for the release of personnel and equipment involved in the response effort.
- ☐ Coordinate with other response personnel to develop and identify demobilization personnel responsibilities, resource release priority/procedures and travel instructions.
- ☐ Coordinate and supervise the decontamination and demobilization operations and keep Planning Section Chief informed of the status.
- ☐ Maintain personal notes of all relevant actions and decisions.
- ☐ Maintain status reports on demobilization resources.
- ☐ Document condition of equipment prior to release.
- ☐ Notify financial group of date of release of equipment components.

Logistics Section Chief: Responsible for ensuring that the response effort is provided with support in regards to resources. The Logistics Section receives information about required resources from the other sections including the equipment, materials, supplies, and personnel. The Logistics section sources, procures, orders, and transports the resources. A checklist for the Logistics Section Chief is as follows:

- ☐ Obtain a briefing from the IC.
- ☐ Notify and activate Logistics Section individuals as needed to fulfill tasks to be performed by the Section.
- ☐ Alert major service contractors of the oil spill emergency and activate them as necessary to support i.e. the Primary Response Action Contractor's operational needs (i.e., facilities, food, vessels, equipment, aircraft, sanitation, transportation services and materials, etc.).
- ☐ Assemble and hold periodic briefings with the Unit Leaders. Coordinate information with Resources Unit Leader in Planning Section.
- ☐ Participate in the preparation of the logistical components of the Incident Action Plan.
- ☐ Coordinate with other Section Chiefs to identify service and support requirements for planned operations.
- ☐ Coordinate and process response personnel requests for additional resources.
- ☐ Analyze resources planned and ensure that support (i.e. housing, food, water, sanitary facilities) is planned and provided.
- ☐ Source, acquire and transport equipment, personnel, and other resources to the appropriate locations as requested by the Operations Section.
- ☐ Review the Incident Action Plan and estimate section needs for next operational period.
- ☐ Estimate future service and support requirements.
- ☐ Identify the resources within the Logistics Section that are not needed or being utilized and reassign or release to decontamination/demobilization.

Procurement/Transportation Unit Leader: Responsible for sourcing and ordering resources and delivery of those resources to the spill work site. The Procurement/Transportation Unit Leader, with the Finance Section, negotiates prices with vendors and contracts with contractors; maintains time records for leased resources and for personnel; and provides ground, water, and air transportation to support response. The Procurement/Transportation Unit Leader reports to the Logistics Section Chief. A checklist for the Procurement/Transportation Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from the Logistics Section Chief.
 - ☐ Obtain list of spill response vendors and contractors and prepare appropriate agreements as necessary to support the incident response effort, and/or as requested by the Section Chiefs.
 - ☐ Coordinate with the Tier II Contractor, the Primary Response Action Contractor, and assist when possible, with the transportation requirements.
 - ☐ Obtain equipment and services requested by Section Chiefs.
 - ☐ Process all purchase orders and work orders for oil spill response vendors/service contractors. Order and coordinate aircraft services for Tier II personnel from Anchorage to local area.
 - ☐ Mobilize transportation resources in local area in a timely manner to meet incoming air cargo flights. Oversee transport of equipment.
 - ☐ Mobilize personnel transportation resources to the airport to meet incoming personnel transport aircraft.
 - ☐ Coordinate with Facilities Unit to ensure adequate warehouse space is available for equipment being ordered and that adequate housing is available and reserved for Tier II personnel.
 - ☐ Ensure that an adequate cash account is established and maintained. Maintain the time records for leased/rented resources.
 - ☐ Determine the availability of transportation services and maintain a list of available services, schedules, etc.
 - ☐ Assess the feasibility of using alternative transportation modes (i.e. fishing vessels, other companies' vessels, charters, etc.) and organize their involvement/assistance if feasible.
- Participate in the preparation of the Air Operations component of the Incident Action Plan. Arrange transportation to get response personnel, equipment, supplies, and materials to the incident area or other response facilities.
- ☐ Ensure that a sufficient number of aircraft are available to support the response effort and activate additional aircraft contracts as necessary.
 - ☐ Coordinate and schedule vessel, vehicle, and aircraft schedules for operations.
 - ☐ Request declaration or cancellation of restricted air and sea space through local or regional officials, as necessary.
 - ☐ Coordinate with governmental agencies.

Facilities Unit Leader: Responsible for providing the facilities to support the oil spill response effort. This Facilities Unit Leader reports to the Logistics Section Chief. A checklist for the Facilities Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from the Logistics Section Chief.
- ☐ Coordinate with the Logistics Chief to understand the quantity of resources to be transported to local area.
- ☐ Make arrangements for adequate personnel housing, and sanitation facilities for incident response personnel.
- ☐ Provide for maintenance and housekeeping services.
- ☐ Ensure adequate personnel are available to operate and maintain the facilities.
- ☐ Provide security services for all facilities and limit access to authorized personnel only.
- ☐ Work closely with the Food Unit Leader to coordinate activities.

Medical Unit Leader: Responsible for providing medevac and medical care contingencies for response personnel. This includes first aid stations, emergency medical technicians, emergency transportation capabilities, and hospitalization capabilities as needed. The Medical Unit Leader reports to the Logistics Section Chief. A checklist for the Medical Unit Leader is as follows:

- ☐ Obtain briefing from Operations Chief and Safety Officer – maintain contact with the Logistics Section Chief.
- ☐ Assess current level of medical services available and activate additional facilities as necessary to provide adequate services for increased risks.
- ☐ Establish first aid stations and ensure that all first aid equipment is functional and that supplies are adequate and readily available.
- ☐ Ensure that medevac capabilities are ready to transport injured personnel to a facility for treatment.
- ☐ Respond to requests for medical aid, transportation or supplies.
- ☐ Establish procedures for major medical emergencies.
- ☐ Attend regular briefings with the Operations Chief and Safety Officer.

Food Unit Leader: Responsible for ensuring that personnel involved in the response are provided adequate food, water and sanitation areas. The Food Unit Leader reports to the Logistics Section Chief. A checklist for the Food Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Operations Section Chief and maintain contact with Logistics Section Chief.
- ☐ Maintain list of numbers of response personnel at each work location.
- ☐ Determine the food, potable water, and sanitation requirements for the response effort, both at the Operational Facility and in the field.
- ☐ Assess the conditions at each location needing food services and determine the most appropriate service method (i.e., restaurant, catering, mess hall).
- ☐ Establish meals schedules. Provide field lunches for field crews.
- ☐ Coordinate with Procurement/Transportation Unit Leader to ensure that contracts are activated to obtain necessary additional resources for increased food services.
- ☐ Verify that potable water and well-balanced meals are being served at each location under adequate health conditions.
- ☐ Increase or decrease food services as necessary.

Finance Section Chief: Responsible for ensuring that adequate financial processes are established to support the oil spill response activities; compensation, claims and insurance issues related to the oil spill and response activities; and cost tracking. The Finance Section is responsible for financial and cost analysis of the response including invoicing, auditing, billings, payments, and services used. A checklist for the Finance Section Chief is as follows:

- ☐ Obtain a briefing from the IC.
- ☐ Establish and obtain approval of spending authorities for personnel.
- ☐ Participate in the preparation of the financial aspects and section assignments of the Incident Action Plan.
- ☐ Develop and administer a cash account.
- ☐ Work with Procurement/Transportation Unit Leader to administer contracts and service agreements for necessary supplies, services, and consultants.
- ☐ Predict spill costs daily and provide to Incident Commander. Document incremental costs and revise predictions as appropriate.
- ☐ Provide accounting functions including auditing, billing, and invoice payments.
- ☐ Document labor, material, and services used during spill response operations.
- ☐ Verify that obligation documents initiated during the spill response are properly prepared. Monitor and record reimbursable expenditures.

Time/Cost Unit Leader: Responsible for personnel time records and for estimating the cost of the response. The Time/Cost Unit Leader establishes a procedure for recording personnel and equipment time and charge rates at each of the response locations. A checklist for the Time Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Finance Section Chief.
- ☐ Establish procedures for recording the time that response personnel and equipment utilized at each response location and implement.
- ☐ Establish procedures to periodically collect and review time reports from contractors and consultants.
- ☐ Establish procedures for generating, verifying, and adjusting costs of personnel, contractors, consultants, supplies, and other services.
- ☐ Maintain cost data and cost summaries and analyze for cost savings possibilities.
- ☐ Ensure that all cost records and documents are prepared accurately and maintain a cumulative cost/financial record.
- ☐ Develop and implement an auditing program.

Compensation/Claims/Insurance Unit: Responsible for claims resulting from a serious injury or death during the response effort and of claims for damages attributable to the spill, spill containment and spill cleanup operations. The Compensation/Claims/Insurance Unit Leader works closely with the Legal Advisor as to laws on damage compensation. A checklist for this Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from Finance Section Chief.
- ☐ Establish and maintain contact with Safety Officer, Legal Advisor, and Medical Unit as required to prepare and process reports on injuries/deaths of incident response personnel.
- ☐ Follow the status of hospitalized personnel and coordinate/prepare required administrative paperwork for injuries or deaths.
- ☐ Oversee or conduct the administration, investigation and documentation required for all injury, death, or property damage claims.
- ☐ Consult with insurance representative, corporate insurance brokers, and underwriters to determine documentation required for insurance purposes. Liaison with insurance representatives during the response.
- ☐ Consult with Legal Advisor on potential and actual natural resource damage claims.

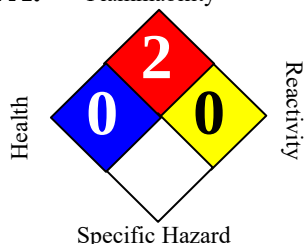
APPENDIX C

SAFETY DATA SHEETS

Safety Data Sheet

Diesel Fuel#1-Low Sulfur (LS) and Ultra Low Sulfur Diesel (ULSD)

NFPA: Flammability



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Diesel Fuel#1-Low Sulfur (LS) and Ultra Low Sulfur Diesel (ULSD)			
Synonyms	:	888100004791			
SDS Number	:	888100004791	Version	:	2.14
Product Use Description	:	Fuel			
Company	:	Tesoro Refining & Marketing 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	Chemtrec (Emergency Contact)	:	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications	:	Flammable Liquid – Category 3 or 4 depending on formulation. Aspiration Hazard – Category 1. Specific Target Organ Toxicity (Repeated Exposure) – Category 2 Specific Target Organ Toxicity (Single Exposure) – Category 3 Chronic Aquatic Toxicity – Category 2
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Pictograms



Signal Word : **Danger**

Hazard Statements

- Flammable liquid and vapor.
- May be fatal if swallowed and enters airways – do not siphon diesel by mouth.
- Suspected of causing skin cancer if repeated and prolonged skin contact occurs.
- Suspected of causing cancer in the respiratory system if repeated and prolonged over-exposure by inhalation occurs.
- May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation.
- Causes eye irritation by eye contact with liquid.
- Repeated or prolonged skin contact can cause skin irritation and dermatitis.
- May cause drowsiness or dizziness by inhalation.

Precautionary statements:**Prevention**

- : Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames, welding and hot surfaces.
- No smoking.
- Keep container tightly closed.
- Ground and/or bond container and receiving equipment.
- Use explosion-proof electrical equipment.
- Use only non-sparking tools if tools are used in flammable atmosphere.
- Take precautionary measures against static discharge.
- Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid.
- Wash hands or liquid-contacted skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Do not breathe vapors.
- Use only outdoors or in a well-ventilated area.

Response

- In case of fire: Use dry chemical, CO₂, water spray or fire fighting foam to extinguish.
- If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If skin or eye irritation persists, get medical attention.
- If inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical attention if you feel unwell.

Storage

Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed . Use only approved containers.

Disposal

Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Fuels, diesel, Gasoil - unspecified	8008-20-6 64741-44-2 64741-77-1	100%
Naphthalene	91-20-3	5 - 7%
Nonane	111-84-2	1 - 1.5%
1,2,4-Trimethylbenzene	95-63-6	1 - 1.5%
Xylene	1330-20-7	1 - 1.5%

Sulfur	7704-34-9	15 ppm maximum
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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, call a physician.
Eye contact	: Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes and 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 oedema, Aspiration may cause pulmonary edema and pneumonitis. Liver disorders, Kidney disorders.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO ₂ , water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. 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	: 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. Use personal protective equipment. Ensure adequate ventilation.
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).

SECTION 7. HANDLING AND STORAGE

Precautions for safe 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.

: 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-initiated 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 as gasoline or naphtha).
- (3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initiated 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).

Conditions for safe storage, including incompatibilities : 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".

: Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
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OSHA Z1	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
ACGIH	Diesel Fuel	68476-30-2	TWA	100 mg/m3
ACGIH	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 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. 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

Appearance	Clear to straw colored liquid
Odor	Characteristic petroleum or kerosene-like odor

Odor threshold	0.1 - 1 ppm typically reported								
pH	Not applicable								
Melting point/freezing point	Gel point can be about -15°F; freezing requires laboratory conditions								
Initial boiling point & range	154 - 372 °C (310° - 702 °F)								
Flash point	38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel								
Evaporation rate	Higher initially and declining as lighter components evaporate								
Flammability (solid, gas)	Flammable vapor released by liquid								
Upper explosive limit	6.5 %(V)								
Lower explosive limit	0.6 %(V)								
Vapor pressure	< 2 mm Hg at 20 °C								
Vapor density (air = 1)	> 4.5								
Relative density (water = 1)	0.86 g/mL								
Solubility (in water)	0.0005 g/100 mL								
Partition coefficient (n-octanol/water)	> 3.3 as log Pow								
Auto-ignition temperature	257 °C (495 °F)								
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.								
Kinematic viscosity	1 to 6 mm ² /s range reported for No.1 or No.2 diesel at ambient temperatures								
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	<table> <tr> <td>Diesel Fuel Oils at terminal load rack:</td><td>At least 25 pS/m</td></tr> <tr> <td>Ultra Low Sulfur Diesel (ULSD) without conductivity additive:</td><td>0 pS/m to 5 pS/m</td></tr> <tr> <td>ULSD at terminal load rack with conductivity additive:</td><td>At least 50 pS/m</td></tr> <tr> <td>JP-8 at terminal load rack:</td><td>150 pS/m to 600 pS/m</td></tr> </table>	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	JP-8 at terminal load rack:	150 pS/m to 600 pS/m
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								
JP-8 at terminal load rack:	150 pS/m to 600 pS/m								

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, acids and alkalies. Do not use with Viton or Fluorel gaskets or seals.
Conditions to avoid	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
Hazardous decomposition products	Ignition and burning can release carbon monoxide, carbon dioxide, non-combusted hydrocarbons (smoke) and, depending on formulation, trace amounts of sulfur dioxide. Diesel exhaust particulates may be a lung hazard (see Section 11).

SECTION 11. TOXICOLOGICAL INFORMATION

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 contact	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.
Eye contact		Eye irritation may result from contact with liquid, mists, and/or vapors
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
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. Components of the product may affect the nervous system. 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	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rabbit Dose: 2,001 mg/kg <u>Acute inhalation toxicity:</u> LC50 rat Dose: 7.64 mg/l Exposure time: 4 h <u>Skin irritation:</u> Classification: Irritating to skin. Result: Severe skin irritation <u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation
Naphthalene	91-20-3	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rat Dose: 2,501 mg/kg <u>Acute inhalation toxicity:</u> LC50 rat Dose: 101 mg/l Exposure time: 4 h <u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation <u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation <u>Carcinogenicity:</u> N11.00422130
Nonane	111-84-2	<u>Acute oral toxicity:</u> LD50 mouse Dose: 218 mg/kg

1,2,4-Trimethylbenzene	95-63-6	Acute inhalation toxicity: LC50 rat Exposure time: 4 h
		Acute inhalation toxicity: LC50 rat Dose: 18 mg/l Exposure time: 4 h
Xylene	1330-20-7	Skin irritation: Classification: Irritating to skin. Result: Skin irritation
		Eye irritation: Classification: Irritating to eyes. Result: Eye irritation
		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

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)

SECTION 12. ECOLOGICAL INFORMATION

Biochemical Oxygen Demand (BOD)	: 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	Toxicity to algae: EC50 Species: Dose: 33 mg/l Exposure time: 24 h
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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 : 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) : 366
Packing instruction (cargo aircraft) : Y344

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) : 355
Packing instruction (passenger aircraft) : Y344

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	: 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	: Acute Health Hazard Chronic Health Hazard Fire Hazard

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Components**CAS-No.**

Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6
Naphthalene	91-20-3
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Nonane	111-84-2

MASS RTK US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Components**CAS-No.**

Nonane	111-84-2
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Naphthalene	91-20-3

NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Components**CAS-No.****Fuels, diesel, No 2; Gasoil - unspecified**

68476-34-6

Naphthalene

91-20-3

Xylene

1330-20-7

1,2,4-Trimethylbenzene

95-63-6

Nonane

111-84-2

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.****1,2,4-Trimethylbenzene**

95-63-6

Xylene

1330-20-7

Naphthalene

91-20-3

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 INFORMATIONFurther information

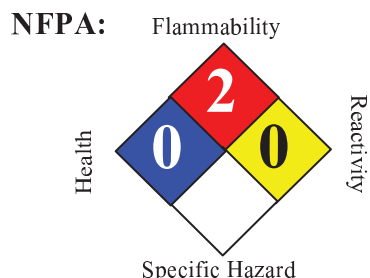
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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.

10/17/2013

1352, 1680, 1766, 1877, 1906, 1907, 1908, 1909, 1910, 1911, 1912

Safety Data Sheet

Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)
Synonyms	:	CARB Diesel , 888100004478
MSDS Number	888100004478	Version 2.34
Product Use Description		
Company	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259	
Tesoro Call Center	(877) 783-7676	Chemtrec (Emergency Contact) (800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications	Flammable Liquid – Category 3 Skin Irritation – Category 2 Eye Irritation – Category 2B Aspiration Hazard – Category 1 Carcinogenicity – Category 2 Acute Toxicity - Inhalation – Category 4 Chronic Aquatic Toxicity – Category 2
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Pictograms



Signal Word

Danger

Hazard Statements

Flammable liquid and vapor.
 May be fatal if swallowed and enters airways – do not siphon diesel by mouth.
 Causes skin irritation.
 Causes eye irritation.
 Suspected of causing skin cancer if repeated and prolonged skin contact occurs.
 Suspected of causing cancer in the respiratory system if repeated and prolonged over-exposure by inhalation occurs.
 May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation.

Toxic if inhaled.
May cause drowsiness or dizziness by inhalation.
Toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, welding and hot surfaces.
No smoking.
Keep container tightly closed.
Ground and/or bond container and receiving equipment.
Use explosion-proof electrical equipment.
Use only non-sparking tools if tools are used in flammable atmosphere.
Take precautionary measures against static discharge.
Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid.
Wash hands or liquid-contacted skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid breathing vapors or mists.
Use only outdoors or in a well-ventilated area.

Response

In case of fire: Use dry chemical, CO₂, water spray or fire fighting foam to extinguish.
If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin or eye irritation persists, get medical attention.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call or doctor or emergency medical provider. See Section 4 and Section 11 for medical treatment information.

Storage

Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.

Disposal

Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

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, Liver disorders, Kidney disorders. Aspiration may cause pulmonary edema and pneumonitis.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO ₂ , water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. 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	: 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.
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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).

SECTION 7. HANDLING AND STORAGE

Precautions for safe 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. : 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).
Conditions for safe storage, including incompatibilities	: 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". : 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	: Where potential for splash exposure exist emergency eye wash capability should be available. Refer to ANSI Z238.1 or manufacturers instruction for specific requirements relating to care and use of emergency eye care equipment. 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

Appearance	Clear to straw colored liquid								
Odor	Characteristic petroleum or kerosene-like odor								
Odor threshold	0.1 - 1 ppm typically reported								
pH	Not applicable								
Melting point/freezing point	Gel point can be about -15°F; freezing requires laboratory conditions								
Initial boiling point & range	154 - 372 °C (310° - 702 °F)								
Flash point	38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel								
Evaporation rate	Higher initially and declining as lighter components evaporate								
Flammability (solid, gas)	Flammable vapor released by liquid								
Upper explosive limit	6.5 %(V)								
Lower explosive limit	0.6 %(V)								
Vapor pressure	< 2 mm Hg at 20 °C								
Vapor density (air = 1)	> 4.5								
Relative density (water = 1)	0.86 g/mL								
Solubility (in water)	0.0005 g/100 mL								
Partition coefficient (n-octanol/water)	> 3.3 as log Pow								
Auto-ignition temperature	257 °C (495 °F)								
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.								
Kinematic viscosity	1 to 6 mm ² /s range reported for No.1 or No.2 diesel at ambient temperatures								
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	<table> <tr> <td>Diesel Fuel Oils at terminal load rack:</td><td>At least 25 pS/m</td></tr> <tr> <td>Ultra Low Sulfur Diesel (ULSD) without conductivity additive:</td><td>0 pS/m to 5 pS/m</td></tr> <tr> <td>ULSD at terminal load rack with conductivity additive:</td><td>At least 50 pS/m</td></tr> <tr> <td>JP-8 at terminal load rack:</td><td>150 pS/m to 600 pS/m</td></tr> </table>	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	JP-8 at terminal load rack:	150 pS/m to 600 pS/m
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								
JP-8 at terminal load rack:	150 pS/m to 600 pS/m								

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, acids and alkalies. Do not use with Viton or Fluorel gaskets or seals.
Conditions to avoid	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).

Hazardous decomposition products

Ignition and burning can release carbon monoxide, carbon dioxide, non-combusted hydrocarbons (smoke) and, depending on formulation, trace amounts of sulfur dioxide. Diesel exhaust particulates may be a lung hazard (see Section 11).

SECTION 11. TOXICOLOGICAL INFORMATION

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 contact	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.
Eye contact	Eye irritation may result from contact with liquid, mists, and/or vapors.
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
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. Repeated over-exposure may cause liver and kidney injury. IARC classifies whole diesel fuel exhaust particulates as carcinogenic to humans (Group 1). 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	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rabbit Dose: 2,001 mg/kg <u>Acute inhalation toxicity:</u> LC50 rat Dose: 7.64 mg/l Exposure time: 4 h <u>Skin irritation:</u> Classification: Irritating to skin. <u>Eye irritation:</u> Classification: Irritating to eyes.
Nonane	111-84-2	<u>Acute oral toxicity:</u> LD50 mouse Dose: 218 mg/kg <u>Acute inhalation toxicity:</u> LC50 rat Exposure time: 4 h
Naphthalene	91-20-3	<u>Acute oral toxicity:</u> 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.

Eye irritation: Classification: Irritating to eyes.

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.

Eye irritation: Classification: Irritating to eyes.

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.

Eye irritation: Classification: Irritating to eyes.

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)

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

Component:

Diesel 68476-34-6 Toxicity to fish:
LC50
Species: Jordanella floridae
Dose: 54 mg/l

Exposure time: 96 h

Toxicity to crustacea:
Species: Palaemonetes pugio
TLm (48 hour) = 3.4 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : Dispose of container and unused contents in accordance with federal, state and local requirements.

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) : 366
Packing instruction (cargo aircraft) : Y344

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) : 355
Packing instruction (passenger aircraft) : Y344

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

: CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

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

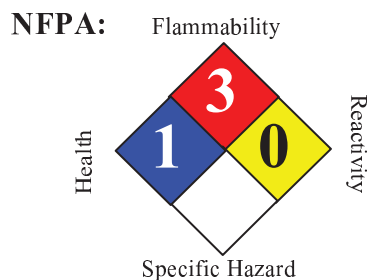
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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.

03/03/2014

1153, 1250, 1443, 1454, 1814, 1815, 1866, 1925

Safety Data Sheet

Gasoline, Unleaded



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Gasoline, Unleaded			
Synonyms	:	Blend of Highly Flammable Petroleum Distillates, Regular, Mid-Grade, Premium , 888100008809			
SDS Number	:	888100008809	Version	:	1.6
Product Use Description	:	Fuel			
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	Chemtrec (Emergency Contact)	:	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications	:	Flammable Liquid – Category 1 or 2 depending on formulation. Aspiration Hazard – Category 1 Carcinogenicity – Category 2 Specific Target Organ Toxicity (Repeated Exposure) – Category 2 Specific Target Organ Toxicity (Single Exposure) – Category 3 Skin Irritation – Category 2 Eye Irritation – Category 2B Chronic Aquatic Toxicity – Category 2
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Pictograms



Signal Word	:	Danger
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Hazard Statements

Extremely flammable liquid and vapor.
May be fatal if swallowed and enters airways – do not siphon gasoline by mouth.
Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.
May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation or skin contact. Causes eye irritation. Can be absorbed through skin.
May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.
Repeated or prolonged skin contact can cause irritation and dermatitis.

Harmful to aquatic life.

Precautionary statements

Prevention

- : Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames, welding and hot surfaces.
- No smoking.
- Keep container tightly closed.
- Ground and/or bond container and receiving equipment.
- Use explosion-proof electrical equipment.
- Use only non-sparking tools (if tools are used in flammable atmosphere).
- Take precautionary measures against static discharge.
- Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact with liquid).
- Wash hands or liquid-contacted skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Do not breathe vapors.
- Use only outdoors or in a well-ventilated area.

Response

- : In case of fire: Use dry chemical, CO₂, water spray or fire fighting foam to extinguish.
- If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If skin or eye irritation persists, get medical attention.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- Get medical attention if you feel unwell.

Storage

- : Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers. Some containers not approved for gasoline may dissolve and release flammable gasoline liquid and vapors.

Disposal

- : Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Gasoline, natural; Low boiling point naphtha	8006-61-9	10 - 30%
Toluene	108-88-3	10 - 30%
Xylene	1330-20-7	10 - 30%
Ethanol; ethyl alcohol	64-17-5	0-8.2%
Trimethylbenzene	25551-13-7	1 - 5%
Isopentane; 2-methylbutane	78-78-4	1 - 5%

Naphthalene	91-20-3	1 - 5%
Benzene	71-43-2	Less than 1.3%
Pentane	109-66-0	1 - 5%
Cyclohexane	110-82-7	1 - 5%
Ethylbenzene	100-41-4	1 - 5%
Butane	106-97-8	1 - 20%
Heptane [and isomers]	142-82-5	0.5 - 0.75%
N-hexane	110-54-3	0.5 - 0.75%

SECTION 4. FIRST AID MEASURES

Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
Skin contact	: In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.
Eye contact	: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice if symptoms persist or develop.
Ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.
Notes to physician	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders. Aspiration may cause pulmonary edema and pneumonitis. Swallowing gasoline is more likely to be fatal for small children than adults, even if aspiration does not occur.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO ₂ , water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. Keep containers and surroundings cool with water spray.
Specific hazards during fire fighting	: Extremely flammable liquid and vapor. This material is combustible/flammable and is sensitive to fire, heat, and static discharge.
Special protective equipment for fire-fighters	: Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Further information	: 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. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).
Environmental precautions	: Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe 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. 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).
Conditions for safe storage, including incompatibilities	: 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".

Reports suggest that government-mandated ethanol, if present, may not be compatible with fiberglass gasoline tanks. Ethanol may dissolve fiberglass resin, causing engine damage and possibly allow leakage of explosive gasoline.

Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

No decomposition if stored and applied as directed. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Store only in containers approved and labeled for gasoline.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA	Benzene	71-43-2	TWA	1 ppm
		71-43-2	STEL	5 ppm
		71-43-2	OSHA_ACT	0.5 ppm
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	Ethanol; Ethyl alcohol	64-17-5	PEL	1,000 ppm 1,900 mg/m3
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
	Cyclohexane	110-82-7	PEL	300 ppm 1,050 mg/m3
	Ethylbenzene	100-41-4	PEL	100 ppm 435 mg/m3
	Heptane [and isomers]	142-82-5	PEL	500 ppm 2,000 mg/m3
	N-hexane	110-54-3	PEL	500 ppm 1,800 mg/m3
ACGIH	Toluene	108-88-3	TWA	50 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Ethanol; Ethyl alcohol	64-17-5	TWA	1,000 ppm
	Trimethylbenzene	25551-13-7	TWA	25 ppm
	Isopentane; 2-Methylbutane	78-78-4	TWA	600 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Benzene	71-43-2	TWA	0.5 ppm
		71-43-2	STEL	2.5 ppm
	Pentane	109-66-0	TWA	600 ppm
	Cyclohexane	110-82-7	TWA	100 ppm
	Ethylbenzene	100-41-4	TWA	100 ppm
		100-41-4	STEL	125 ppm
	Heptane [and isomers]	142-82-5	TWA	400 ppm
		142-82-5	STEL	500 ppm

	N-hexane	110-54-3	TWA	50 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. Ensure that eyewash stations and safety showers are close to the workstation location.			
Hand protection	: Gloves constructed of nitrile or neoprene 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. Flame resistant clothing such as Nomex® is recommended in areas where material is stored or handled.			
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

Appearance	: Clear to straw colored liquid
Odor	: Characteristic hydrocarbon-like
Odor threshold	0.5 - 1.1 ppm
pH	: Not applicable
Melting point/freezing point	About -101°C (-150°F)
Initial boiling point & range	Boiling point varies: 30 – 200°C (85 – 392°F)
Flash point	< -21°C (-5.8°F)
Evaporation rate	: Higher initially and declining as lighter components evaporate
Flammability (solid, gas)	: Flammable vapor released by liquid

Upper explosive limit	7.6 %(V)
Lower explosive limit	1.3 %(V)
Vapor pressure	345 - 1,034 hPa at 37.8 °C (100.0 °F)
Vapor density (air = 1)	Approximately 3 to 4
Relative density (water = 1)	0.8 g/mL
Solubility (in water)	Negligible
Partition coefficient (n-octanol/water)	2 – 7 as log Pow
Auto-ignition temperature	Approximately 250°C (480°F)
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.
Kinematic viscosity	0.64 to 0.88 mm ² /s range reported for gasoline
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	: Hydrocarbon liquids without static dissipater additive may have conductivity below 1 picoSiemens per meter (pS/m). The highest electro-static ignition risks are associated with "ultra-low conductivities" below 5 pS/m. See Section 7 for sources of information on defining safe loading and handling procedures for low conductivity products.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, alkaline products and strong acids. Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.
Conditions to avoid	: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
Hazardous decomposition products	: Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Skin contact	: Irritating to skin. Can be partially absorbed through skin.
Eye contact	: Irritating to eyes.
Ingestion	: 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. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death may occur.

Inhalation and further information

Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, over excitation. Exposure to very high levels can result in unconsciousness and death.

Repeated over-exposure may cause liver and kidney injuries.
Components of the product may affect the nervous system.

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain. This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

Component:

Gasoline, natural; Low boiling point naphtha	8006-61-9	<u>Acute oral toxicity:</u> LD50 rat Dose: 18.8 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 20.7 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		<u>Eye irritation:</u> Classification: Irritating to eyes.
Toluene	108-88-3	<u>Acute oral toxicity:</u> LD50 rat Dose: 636 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rabbit Dose: 12,124 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 49 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		<u>Eye irritation:</u> Classification: Irritating to eyes.
Xylene	1330-20-7	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,840 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rabbit Dose: ca. 4,500 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 6,350 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		<u>Eye irritation:</u> Classification: Irritating to eyes.
Ethanol; Ethyl alcohol	64-17-5	<u>Acute oral toxicity:</u> LD50 rat

Dose: 6,200 mg/kg

Acute dermal toxicity: LD50 rabbit

Dose: 19,999 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 8,001 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Eye irritation: Classification: Irritating to eyes.

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.

Eye irritation: Classification: Irritating to eyes.

Carcinogenicity: N11.00422130

Benzene

71-43-2

Acute oral toxicity: LD50 rat

Dose: 930 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 44 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Eye irritation: Classification: Irritating to eyes.

Result: Risk of serious damage to eyes.

Pentane

109-66-0

Acute oral toxicity: LD50 rat

Dose: 2,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 364 mg/l

Exposure time: 4 h

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.

Cyclohexane

110-82-7

Acute dermal toxicity: LD50 rabbit

Dose: 2,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 14 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Eye irritation: Classification: Irritating to eyes.

Ethylbenzene

100-41-4

Acute oral toxicity: LD50 rat

Dose: 3,500 mg/kg

Acute dermal toxicity: LD50 rabbit

Dose: 15,500 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 18 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.Eye irritation: Classification: Irritating to eyes.

.

Heptane [and isomers]

142-82-5

Acute oral toxicity: LD50 rat

Dose: 15,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 103 g/m3

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.Eye irritation: Classification: Irritating to eyes.**N-hexane**

110-54-3

Acute oral toxicity: LD50 rat

Dose: 25,000 mg/kg

Acute dermal toxicity: LD50 rabbit

Dose: 2,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 171.6 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.Eye irritation: Classification: Irritating to eyes.Teratogenicity: N11.00418960**Carcinogenicity**

NTP	:	Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2)
IARC	:	Gasoline, natural; Low boiling point naphtha (CAS-No.: 8006-61-9) Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2) Ethylbenzene (CAS-No.: 100-41-4)
OSHA	:	Benzene (CAS-No.: 71-43-2)
CA Prop 65	:	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Toluene (CAS-No.: 108-88-3) Benzene (CAS-No.: 71-43-2)

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

Component:**Toluene**

108-88-3

Toxicity to fish:

LC50

Species: Carassius auratus (goldfish)

Dose: 13 mg/l

Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 11.5 mg/l

Exposure time: 48 h

Toxicity to algae:

IC50

Species: Selenastrum capricornutum (green algae)

Dose: 12 mg/l

Exposure time: 72 h

Ethanol; Ethyl alcohol

64-17-5

Toxicity to fish:

LC50

Species: Leuciscus idus (Golden orfe)

Dose: 8,140 mg/l

Exposure time: 48 h

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 9,268 - 14,221 mg/l

Exposure time: 48 h

Isopentane; 2-Methylbutane

78-78-4

Toxicity to fish:

LC50

Species: Oncorhynchus mykiss (rainbow trout)

Dose: 3.1 mg/l

Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 2.3 mg/l

Exposure time: 96 h

Naphthalene

91-20-3

Toxicity to algae:

EC50

Species:

Dose: 33 mg/l

Exposure time: 24 h

Pentane

109-66-0

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 9.74 mg/l

Exposure time: 48 h

Cyclohexane

110-82-7

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 3.78 mg/l

Exposure time: 48 h

Heptane [and isomers]

142-82-5

Toxicity to fish:

LC50

Species: Carassius auratus (goldfish)

Dose: 4 mg/l

Exposure time: 24 h

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 1.5 mg/l

Exposure time: 48 h

N-hexane

110-54-3

Toxicity to fish:

LC50

Species: Pimephales promelas (fathead minnow)

Dose: 2.5 mg/l

Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 2.1 mg/l

Exposure time: 48 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION**CFR**

Proper shipping name : Petrol
UN-No. : 1203
Class : 3
Packing group : II

TDG

Proper shipping name : Gasoline
UN-No. : UN1203
Class : 3
Packing group : II

IATA Cargo Transport

UN UN-No. : UN1203
Description of the goods : Gasoline
Class : 3
Packaging group : II
ICAO-Labels : 3
Packing instruction (cargo aircraft) : 364
Packing instruction (cargo aircraft) : Y341

IATA Passenger Transport

UN UN-No. : UN1203
Description of the goods : Gasoline
Class : 3
Packaging group : II
ICAO-Labels : 3
Packing instruction (passenger aircraft) : 353
Packing instruction (passenger aircraft) : Y341

IMDG-Code

UN-No. : UN 1203

Description of the goods	: Gasoline
Class	: 3
Packaging group	: II
IMDG-Labels	: 3
EmS Number	: F-E S-E
Marine pollutant	: No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards	: Flammable liquid Highly toxic by ingestion Moderate skin irritant Severe eye irritant Carcinogen
TSCA Status	: On TSCA Inventory
DSL Status	: . All components are on the Canadian DSL list.
SARA 311/312 Hazards	: Fire Hazard Acute Health Hazard Chronic Health Hazard

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

California Prop. 65	: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
	Toluene 108-88-3
	Benzene 71-43-2

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.

Revision Date : 03/06/2014

6, 8, 10, 12, 14, 16, 64, 68, 91, 112, 306, 1092, 1106, 1500, 1570, 1571, 1651, 1652, 1654, 1700, 1701, 1702, 1710, 1711, 1714, 1726, 1729, 1730, 1732, 1733, 1826, 1848, 1880, 1950



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

AVIATION GASOLINE

Product Use: Fuel

Product Number(s): CPS200205, CPS200239, CPS200285, CPS200456

Synonyms: Avgas 100, Avgas 100 LL

Company Identification

Chevron Aviation

a division of Chevron U.S.A., Inc.

1500 Louisiana St.

Houston, TX 77002

United States of America

Transportation Emergency Response

CHEMTREC: +1 800-424-9300 or +1 703-527-3887

Health Emergency

Chevron Emergency Information Center: Emergency Information Centers are located in the USA.

International collect calls accepted. +1 800-231-0623 or +1 510-231-0623

Product Information

Product Information: +1 510-242-5357 (USA)

MSDS Requests: +1 800-689-3998 (USA)

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Aviation Gasoline		100 %volume
Naphtha, light alkylate	64741-66-8	70 - 100 %volume
Naphtha, isomerization	64741-70-4	0 - 10 %volume
Toluene	108-88-3	0 - 20 %volume
Benzene	71-43-2	0 - 1 %volume
Tetraethyl lead	78-00-2	< 4 ml/gal
Ethylene dibromide	106-93-4	< 4 ml/gal

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE

- HARMFUL OR FATAL IF SWALLOWED - MAY CAUSE LUNG DAMAGE IF SWALLOWED
- CAUSES EYE AND SKIN IRRITATION
- MAY CAUSE RESPIRATORY TRACT IRRITATION IF INHALED
- VAPOR HARMFUL
- SUSPECT CANCER HAZARD - MAY CAUSE CANCER
- BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS
- MAY CAUSE DAMAGE TO:
- NERVOUS SYSTEM
- AUDITORY SYSTEM
- TOXIC TO AQUATIC ORGANISMS. MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. 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. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if inhaled.

Cancer: Prolonged or repeated exposure to this material may 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 ethylene dibromide which has been classified as a Group 2A carcinogen 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).

Target Organs: Repeated inhalation of this material at concentrations above the recommended exposure limit may cause damage to the following organ(s) based on animal data: Nervous System Auditory System

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 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 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.

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) -46 °C (-51 °F) (Min)

Autoignition: 440 °C (824 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 1.2 Upper: 7

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: 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.

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. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.

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'.

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: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

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.

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
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Aviation Gasoline	CVX	200 ppm	1000 ppm	--	--
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)	--
Ethylene dibromide	OSHA Z-2	20 ppm (weight)	--	30 ppm (weight)	--
Tetraethyl lead	ACGIH	.1 mg/m3	--	--	Skin as Pb
Tetraethyl lead	OSHA SRS	.05 mg/m3	--	--	--
Tetraethyl lead	OSHA Z-1	.075 mg/m3	--	--	Skin as Pb
Toluene	ACGIH	50 ppm (weight)	--	--	Skin A4
Toluene	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--

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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Blue or green dyed

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: 38 - 49 kPa @ 38 °C (100.4 °F)

Vapor Density (Air = 1): 3 - 4 (Estimated)

Boiling Point: 60°C (140°F) - 170°C (338°F)

Solubility: Low PPM range in water.

Freezing Point: -58°C (-72.4°F) (Max)

Specific Gravity: 0.65 - 0.75 @ 15°C (59°F)

Viscosity: <1 SUS @ 37.8°C (100°F)

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: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains light alkylate naphtha. An inhalation study in rats found no adverse effects on male or female reproductive abilities and no birth defects in pups born to the exposed mothers. This study was done with that portion of light alkylate naphtha that distilled below 145 F (C4 to C6 hydrocarbons). The concentrations used in the study were up to 25,000 mg/m³ which is 60% of the lower explosive limit. That dose was also the no-observed-adverse-effect level.

This product contains benzene.

GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains toluene.

GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.

HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.

COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at

doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This material contains organic lead. Organic lead (as Pb) is toxic by ingestion, inhalation, and skin contact. Signs and symptoms of chronic or subacute poisoning may initially include insomnia and restlessness; progressing into nausea, vomiting, loss of appetite, dizziness, abnormal blood pressure and temperature, increased respiratory rate, and skin pallor. In addition, continued exposure or acute poisoning may result in weakness, loss of weight, visual and auditory hallucinations, violent or maniacal type attacks, increased excitability, coarse tremors, convulsions and death.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. The ecotoxicity hazard is based on data for a similar material.

ENVIRONMENTAL FATE

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.

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, MARINE POLLUTANT (LEADED GASOLINE)

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (GASOLINE LEADED)

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, 03, 04, 05, 06, 07
Ethylene dibromide	01-2A, 02, 03, 04, 05, 06, 07
Tetraethyl lead	03, 04, 05, 06, 07
Toluene	03, 04, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	733 lbs
Ethylene dibromide	1 lbs	None	616 lbs
Tetraethyl lead	10 lbs	None	6155 lbs
Toluene	1000 lbs	None	3736 lbs

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), EINECS (European Union), IECSC (China), KECI (Korea), TSCA (United States).

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision A: Very Toxic Material -
Chronic Toxic Effects
Teratogenicity and Embryotoxicity
Carcinogenicity
Class D, Division 2, Subdivision B: Toxic Material -
Skin or Eye Irritation

SECTION 16 OTHER INFORMATION

NFPA 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 the following sections of this Material Safety Data Sheet:
1.

Revision Date: FEBRUARY 26, 2008

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.

Safety Data Sheet

Jet Fuel

NFPA: Flammability



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Jet Fuel			
Synonyms	:	Jet Fuel - A, A-I, A-50, Aviation Turbine Fuel, Jet A-I, Jet A; Avjet For Blending; Jet Q Turbine Fuel, Aviation Fuel; Turbine Fuel; JP-8, Av-Jet, Sweet Distillate, APPC463, RS203, 888100004452			
SDS Number	:	888100004452	Version	:	2.19
Product Use Description	:	Fuel			
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	Chemtrec (Emergency Contact)	:	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications	:	Flammable Liquid – Category 3 Aspiration Hazard – Category 1 Skin Irritation – Category 2 Specific Target Organ Toxicity (Single Exposure) – Category 3 Chronic Aquatic Toxicity – Category 2
Pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	Flammable liquid and vapor. May be fatal if swallowed and enters airways – do not siphon by mouth. Causes skin irritation. Repeated or prolonged skin contact can cause skin irritation and dermatitis. May cause drowsiness or dizziness by inhalation. May cause irritation of respiratory system. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	
Prevention	:	Keep away from heat, sparks, open flames, welding and hot surfaces. No smoking.

	Keep container tightly closed. Ground and/or bond container and receiving equipment. Use explosion-proof electrical equipment. Use only non-sparking tools if tools are used in flammable atmosphere. Take precautionary measures against static discharge. Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid. Wash hands or liquid-contacted skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe vapors or mists. Use only outdoors or in a well-ventilated area.
Response	In case of fire: Use dry chemical, CO2, water spray or fire fighting foam to extinguish. If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth. If skin irritation persists, get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical attention if you feel unwell.
Storage	Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed . Use only approved containers.
Disposal	Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Kerosene (petroleum)	8008-20-6	100%
Naphthalene	91-20-3	0 to 3%
Ethyl Benzene	100-41-4	0 to 1%
Trimethy Benzene	95-63-6	0 to 1%
Ethyl Benzene	100-41-4	0 to 1%

SECTION 4. FIRST AID MEASURES

Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. 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	: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention immediately.

Ingestion	: Do NOT induce vomiting. Do not give liquids. Seek medical attention immediately. If vomiting does occur naturally, keep head below the hips to reduce the risks of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.
Notes to physician	: Symptoms: Aspiration may cause pulmonary edema and pneumonitis. Treatment: Do not induce vomiting, use gastric lavage only. Remove from further exposure and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Carbon dioxide (CO ₂), Water spray, Dry chemical, Foam, Keep containers and surroundings cool with water spray., Do not use a solid water stream as it may scatter and spread fire., Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.
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. Sealed containers may rupture when heated. Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back.
Special protective equipment for fire-fighters	: Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.
Further information	: Exposure to decomposition products may be a hazard to health. Standard procedure for chemical fires.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN if applicable. 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.
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.
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).

SECTION 7. HANDLING AND STORAGE

Precautions for safe 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
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areas with intrinsically safe electrical classification.

- : 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-initiated 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 as gasoline or naphtha).
 - (3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initiated 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).

Conditions for safe storage, including incompatibilities

- : 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".
- : Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.
- : Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA Z1	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
	Ethyl Benzene	100-41-4	PEL	100 ppm 435 mg/m3
ACGIH	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Kerosene (petroleum)	8008-20-6	TWA	200 mg/m3
	Ethyl Benzene	100-41-4	TWA	100 ppm 434 mg/m3
			STEL	125 ppm 543 mg/m3

Protective measures : Keep out of reach of children.

Engineering measures : Use only intrinsically safe electrical equipment approved for use in classified areas. Emergency eye wash capability should be available in the vicinity of any potential splash exposure.

Eye protection	: Goggles and face shield as needed to prevent eye and face contact.
Hand protection	: Gloves constructed of nitrile, neoprene, or PVC are recommended.
Skin and body protection	: Chemical protective clothing such as DuPont TyChem®, Barricade or equivalent, recommended based on degree of exposure. Consult manufacturer specifications for further information.
Respiratory protection	: 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

Appearance	: Clear to straw colored liquid
Odor	Characteristic petroleum or kerosene-like odor
Odor threshold	0.1 - 1 ppm typically reported
pH	Not applicable
Melting point/freezing point	Gel point can be about -15°F; freezing requires laboratory conditions
Initial boiling point & range	154 - 372 °C (310° - 702 °F)
Flash point	38°C (100°F) Minimum
Evaporation rate	Higher initially and declining as lighter components evaporate
Flammability (solid, gas)	Flammable vapor released by liquid
Upper explosive limit	5.0 %(V)
Lower explosive limit	0.7 %(V)
Vapor pressure	< 2 mm Hg at 20 °C
Vapor density (air = 1)	> 4.50.8 g/mL
Relative density (water = 1)	0.0005 g/100 mL
Solubility (in water)	
Partition coefficient (n-octanol/water)	3.3 to 6 as log Pow
Auto-ignition temperature	238°C (460°F)
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.
Kinematic viscosity	1.6 mm²/s at 40°C
Conductivity	Diesel Fuel Oils at terminal load rack: At least 25 pS/m
(conductivity can be reduced by environmental factors such as a decrease in temperature)	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
	JP-8 at terminal load rack: 150 pS/m to 600 pS/m

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, acids and alkalies.
Conditions to avoid	: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
Hazardous decomposition products	: Ignition and burning can release carbon monoxide, carbon dioxide, non-combusted hydrocarbons (smoke) and, depending on formulation, trace amounts of sulfur dioxide. Diesel exhaust particulates may be a lung hazard (see Section 11).

SECTION 11. TOXICOLOGICAL INFORMATION

Skin irritation	: Irritating to skin. Repeated or prolonged contact can cause dryness, cracking and dermatitis. Liquid may be absorbed through skin in toxic amounts if large areas of the skin are repeatedly exposed.
Eye irritation	: May cause eye irritation.
Inhalation	Inhalation of vapors or mist may result in respiratory tract irritation and central nervous system effects including headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death.
Chronic Exposure	Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposure has not been determined.
Further information	: Kerosene does not have a measurable effect on human reproduction or development. Kerosene is not listed as carcinogenic by NTP, OSHA, and ACGIH. IARC has listed kerosene as a probable human carcinogen. Some petroleum distillates have been found to cause adverse reproductive effects in laboratory animals. Acute and chronic exposure to kerosene may result in CNS effects including irritability, restlessness, ataxia, drowsiness, convulsions, coma and death. The most common health effect associated with chronic kerosene exposure is dermatitis.

Component:

Kerosene (petroleum)	8008-20-6	<u>Acute oral toxicity:</u> LD50 rat 4 hour Dose: >5,000 mg/kg <u>Acute dermal toxicity:</u> LD50 rabbit Dose: >2,001 mg/kg <u>Acute inhalation toxicity:</u> LC50 rat Dose: >5,000 mg/l Exposure time: 4 h <u>Skin irritation:</u> Classification: Irritating to skin. Result: Skin irritation
Naphthalene	91-20-3	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,001 mg/kg <u>Acute dermal toxicity:</u> 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

Carcinogenicity

NTP

Naphthalene (CAS-No.: 91-20-3)

IARC

Kerosene is not listed as carcinogenic by NTP, OSHA, and ACGIH. IARC has listed kerosene as a probable human carcinogen.

naphthalene (CAS-No.: 91-20-3)

Kerosene (petroleum) (CAS-No.: 8008-20-6)

CA Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

Naphthalene (CAS-No.: 91-20-3)

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information

: 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.

Component:

Naphthalene

91-20-3

Toxicity to algae:

EC50

Species:

Dose: 33 mg/l

Exposure time: 24 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal

: Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name : Fuel, aviation, turbine engine

UN-No. : 1863

Class : 3

	Packing group	: III
TDG		
	Proper shipping name	: Fuel, aviation, turbine engine
	UN-No.	: UN1863
	Class	: 3
	Packing group	: III
IATA Cargo Transport		
	UN UN-No.	: UN1863
	Description of the goods	: Fuel, aviation, turbine engine
	Class	: 3
	Packaging group	: III
	ICAO-Labels	: 3
	Packing instruction (cargo aircraft)	: 366
	Packing instruction (cargo aircraft)	: Y344
IATA Passenger Transport		
	UN UN-No.	: UN1863
	Description of the goods	: Fuel, aviation, turbine engine
	Class	: 3
	Packaging group	: III
	ICAO-Labels	: 3
	Packing instruction (passenger aircraft)	: 355
	Packing instruction (passenger aircraft)	: Y344
IMDG-Code		
	UN-No.	: UN 1863
	Description of the goods	: Fuel, aviation, turbine engine
	Class	: 3
	Packaging group	: III
	IMDG-Labels	: 3
	EmS Number	: F-E S-E
	Marine pollutant	: Yes

SECTION 15. REGULATORY INFORMATION

TSCA Status	: On TSCA Inventory
DSL Status	: All components of this product are on the Canadian DSL list.
SARA 311/312 Hazards	: Acute Health Hazard Chronic Health Hazard Fire Hazard

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

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

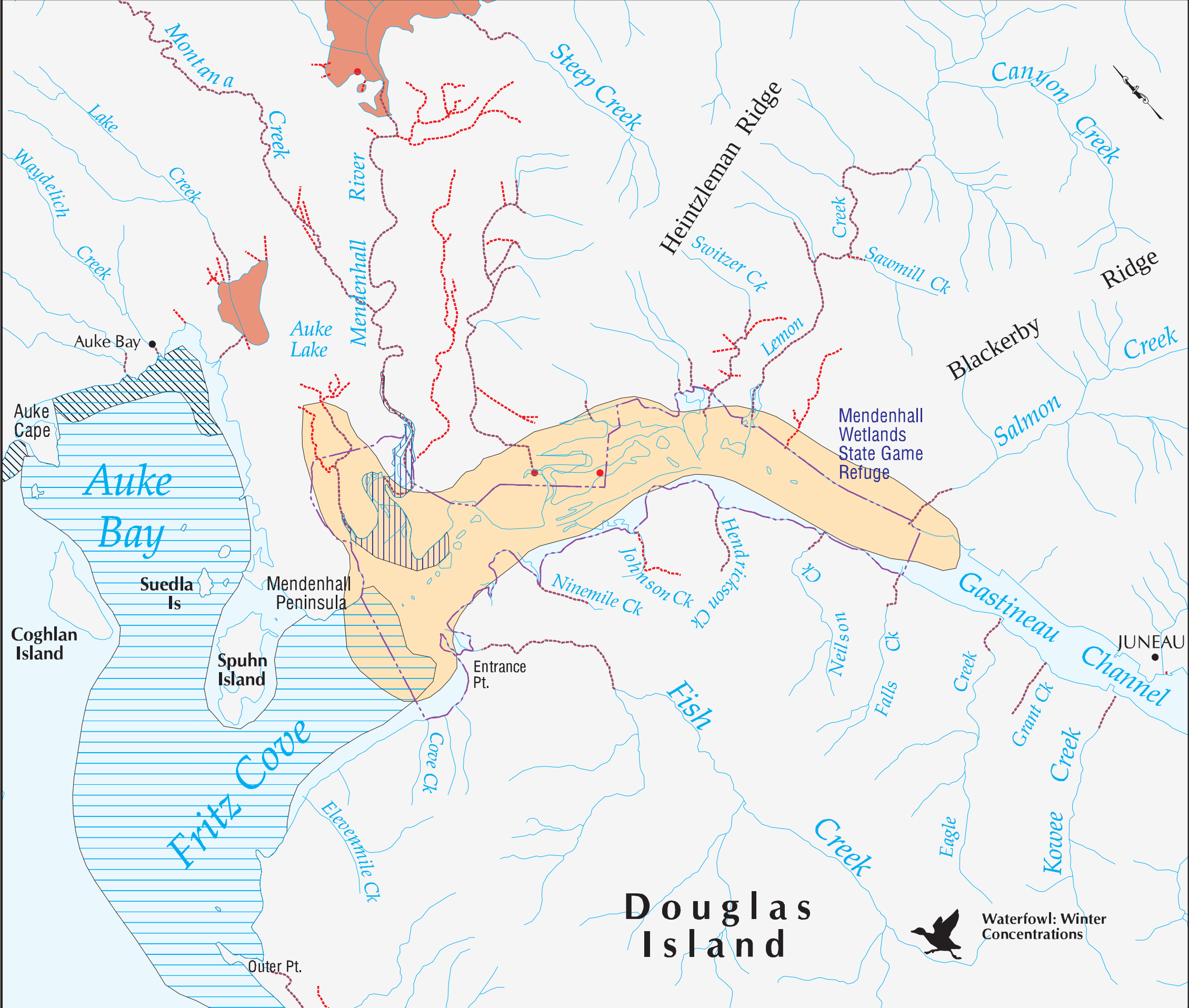
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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.

Revision Date : 04/09/2015

40, 41, 42, 43, 139, 141, 263, 1,117, 1,333, 1,450, 1,640

APPENDIX D

MOST ENVIRONMENTALLY SENSITIVE AREAS



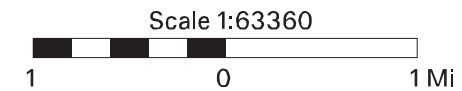
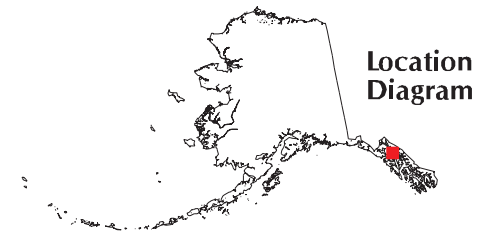
MESA61

MENDENHALL WETLANDS

LEGEND

- Waterfowl/Shorebird Spring and Fall Concentrations
- Eulachon Spawning Areas
- Herring Spawning Areas
- Herring Wintering Areas
- Anadromous Lake
- Anadromous Streams
- Seabird Colonies
- Less Than or Equal To 10,000 Birds
- Mendenhall Wetlands State Game Refuge Boundary

SOURCES: DF&G 1990b; Research Planning Institute, Inc. 1992; ADF&G 1996b; USFWS 1996



State of Alaska
Department of Fish and Game
Habitat and Restoration Division
June, 1998

