OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

Cook Inlet Pipe Line Company

Public Review
May 2012

Cook Inlet Pipe Line Company

OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

MANAGEMENT APPROVAL AND RESOURCE COMMITMENT STATEMENT

I certify that this Oil Discharge Prevention and Contingency Plan (ODPCP) is sufficient, and shall commit and implement this Plan as described herein.

In accordance with the requirements under the Oil Pollution Act of 1990 (OPA 90), I also affirm that I am the designated Qualified Individual (QI) and that Cook Inlet Pipe Line Company (CIPL) will have the necessary equipment, manpower, and materials available to respond to a worst-case discharge from our Cook Inlet operations.

This Plan is consistent with the requirements of the National Contingency Plan and the Alaska Federal/ State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (Area Contingency Plan).

John Barnes
Executive Vice President
Hilcorp Alaska, LLC

Date

Cook Inlet Pipe Line Company
3800 Centerpoint Drive, Suite 100
Anchorage, Alaska 99503
(907) 776-6800 telephone

RECORD OF REVISIONS

REVISION NUMBER	REVISION DATE	SUMMARY OF REVISION CHANGE

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS & ABBREVIATIONS

AAC	Alaska Administrative Code
ACS	Alaska Clean Seas
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AIMS	Alaska Incident Management System
AOGCC	Alaska Oil and Gas Conservation Commission
API	American Petroleum Institute
ARRT	Alaska Regional Response Team
ASME	American Society of Mechanical Engineers
BAT	Best Available Technology
bbl	Barrel
BPH	Barrels per hour
BOPH	Barrels of oil per hour
CFR	Code of Federal Regulations
CIPL	Cook Inlet Pipe Line Company
CIRI	Cook Inlet Region Inc.
CISPRI	Cook Inlet Spill Prevention and Response, Inc.
CO_2	carbon dioxide
CV	contract vessel
DOT	U.S. Department of Transportation
DP	differential pressure
DRT	Drift River Terminal
EFA	Ed Farmer and Associates, Inc.
EPA	U.S. Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESI	Environmentally Sensitive Index
FAA	Federal Aviation Administration
FLIR	forward looking infrared
FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
ft	feet
ft^3	cubic feet
gal	gallon
G/A	Ground to air
GPTF	Granite Point Tank Farm
gpm	gallons per minute
GPS	global positioning system
GRS	Geographic Response Strategy
H_2S	hydrogen sulfide
HAK	Hilcorp Alaska, LLC
HAZMAT	hazardous material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HHLA	high-high liquid-level alarm
HHLSD	high-high liquid shutdown
HLA	high liquid-level alarm
HP	Horsepower
hr	hour

Hz	hertz
IBR	International Bird Rescue
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IMH	Incident Management Handbook
IMT	Incident Management Team
IRT	Immediate Response Team
LEL	Lower Explosive Limit
MassPack	MassPack Compensated Flow Comparison
MHW	Mean High Water
MHz	megahertz
MOV	motor-operated valve
mph	miles per hour
MSDS	Material Safety Data Sheets
mV	millivolt
M/V	motor vessel
N/A	not applicable
NACE	National Association of Corrosion Engineers
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPREP	National Preparedness for Response Exercise Program
NPWM	Negative Pressure Wave Monitoring
NRC	National Response Center
O_2	oxygen
ODPCP	Oil Discharge Prevention and Contingency Plan
OMSI	Ocean Marine Services Inc.
OPA 90	Oil Pollution Act of 1990
OSHA	Occupational Safety and Health Administration
OSK	Offshore Services Kenai
OSRV	Oil Spill Response Vessel
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIC	Person In Charge
PM	preventative maintenance
PPE	personal protective equipment
ppm	parts per million
psi	pounds per square inch
psig	pounds per square inch gauge
QI	Qualified Individual
RLG	remote liquid level gauge
RPS	Response Planning Standard
RRT	Regional Response Team
RTP	response trained personnel
SCADA	Supervisory Control and Data Acquisition
SCAT	Shoreline Cleanup Assessment Technique
SOP	Standard operating procedure
SOSC	State On-Scene Coordinator
SPCC	Spill Prevention, Control, and Countermeasure
SPCO	State Pipeline Coordinator's Office
STEL	short-term exposure limit

TBPF	Trading Bay Production Facility
UC	Unified Command
USC	United States Code
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
VHF	very high frequency
WFPS	West Foreland Pump Station
yd^3	cubic yard

INTRODUCTION

Cook Inlet Pipe Line Company (CIPL) is the operator of the Cook Inlet Pipe Line and associated facilities, including the following components and operations:

- Crude oil transmission pipelines from Granite Point Tank Farm (GPTF) and West Foreland Pump Station (WFPS);
- Drift River Terminal (DRT); and
- Christy Lee Offshore Loading Platform.

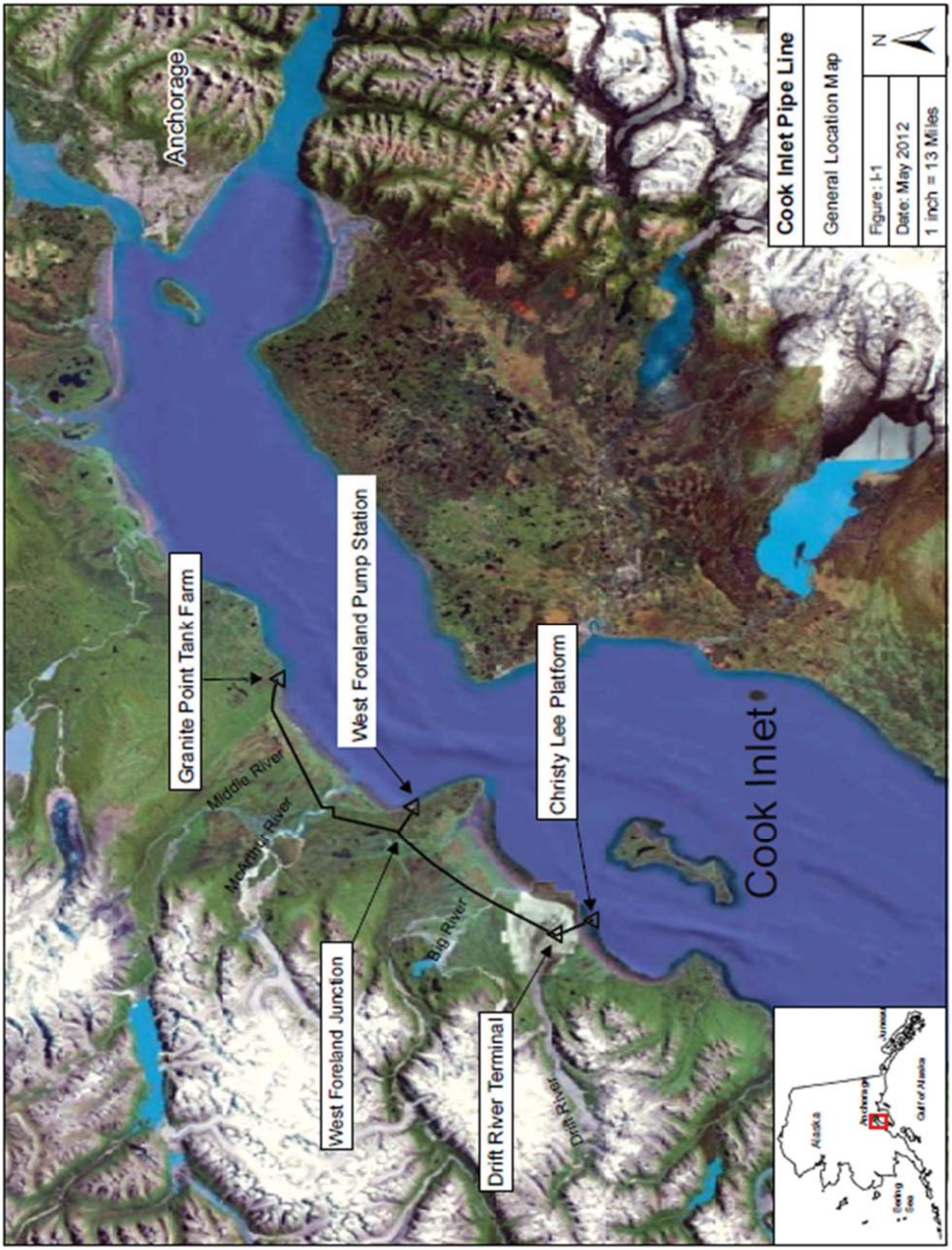
A general location map is provided in Figure I-1. Detailed facility diagrams are presented in Section 1.8. Piping and stream crossing diagrams are included in Appendix A.

This Oil Discharge Prevention and Contingency Plan (ODPCP) has been prepared to cover all aspects of CIPL's operations. Information is contained in the plan in the general format as required by the Alaska Department of Environmental Conservation (ADEC) in accordance with Title 18 of the Alaska Administrative Code (AAC), Chapter 75 (18 AAC 75).

This plan is also intended to satisfy requirements for Facility Response Plans (FRP) under the Oil Pollution Act of 1990 (OPA 90). Agencies having regulatory authorities under OPA 90 include:

- U.S. Coast Guard (USCG) – Title 33 of the Code of Federal Regulations (CFR), Part 154 (33 CFR 154)
- U.S. Environmental Protection Agency (EPA) – 40 CFR 11.20
- U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) – 49 CFR 194

Information and cross-references specific to these agencies are provided in Appendix B – Federal FRPs.


Anchorage
Granite Point Tank Farm
West Foreland Pump Station
Christy Lee Platform
Middle River
McArthur River
Big River
West Foreland Junction
Drift River Terminal
Drift River
Cook Inlet
Cook Inlet Pipe Line
General Location Map
Figure: I-1
Date: May 2012
1 inch = 13 Miles
N
Alaska
Anchorage
Gulf of Alaska
Bering Sea
Juneau

REVISIONS AND RENEWAL

CIPL maintains this ODPCP. CIPL reviews current operating conditions and response preparedness, and ensures that plan revisions and renewals are submitted to appropriate agencies according to the time schedules listed in the table below. If CIPL determines that significant changes occur in their ability to respond to the worst case discharges, or that would substantially affect the implementation of this ODPCP, it will be updated or amended. Any revisions or modifications will be annotated on the attached Record of Revisions and distributed to all ODPCP recipients.

The following factors will cause revisions to the ODPCP:

- New pipeline construction or purchase
- Change to worst-case discharge volume
- Change in commodities transported
- Change in oil spill removal organization
- Change in Qualified Individual
- Change in the National Contingency Plan or Area Contingency Plan that has a significant impact on the appropriateness of response equipment or response strategies
- Improvements per post-drill evaluation results, if any
- Improvements from post-incident evaluation results, if any
- Change in spill prevention and/or spill response procedures
- Change in ownership or operatorship

CIPL may make minor modifications such as updates to telephone numbers. These changes will be approved by the CIPL Team Leader and distributed to all plan holders as changes are required.

RENEWAL REQUIREMENTS

AGENCY AND CITATION	RENEWAL CYCLE	EXPIRATION DATE
ADEC	5 years	November 7, 2012
EPA-OPA 90	5 years	May 15, 2014
PHMSA-OPA 90	5 years	April 1, 2015
USCG-OPA 90	5 years	July 30, 2012

ADEC APPROVAL - PLACEHOLDER

STATEMENT OF CONTRACTUAL TERMS WITH COOK INLET SPILL PREVENTION AND RESPONSE, INC. (CISPRI) – PLACEHOLDER

PART 1. RESPONSE ACTION PLAN
[18 AAC 75.425(E)(1)]

1.1 EMERGENCY ACTION CHECKLIST [18 AAC 75.425(E)(1(A)]

The following Emergency Action Checklist identifies actions to be taken by initial response personnel until the response organization has been established and the Incident Commander (IC) has taken control of the situation. Figure 1-1 provides a flow chart for immediate spill notification and reporting. Figure 1-2 illustrates the Incident Command System (ICS) structure. Additional information about the ICS organization is included in Section 3.3.

EMERGENCY ACTION CHECKLIST

First Person to Sight Spill	Immediately notify the Facility Supervisor with the following information: • Location • Initial spill site • Possible cause • Present condition of spill • Is it affecting or about to enter open water
Facility Supervisor	Account for all personnel and ensure their safety. Assess the possibility of an explosion or fire. Initiate the following control operations: Determine the source of the spill, Turn off electrical power and all other sources of ignition from a safe location, Close all lines and piping leading to the problem area, If the cause is determined to be a pipeline leak, initiate shut-in procedures Close all drains, if necessary. Assess the spill situation to: Judge the effectiveness of control operations, Determine the type or classification of oil spilled, and Estimate the spill volume or flow rate. If the spill is onshore, determine the accessibility of the spill site. If the spill is offshore, assess the meteorological and oceanographic conditions including: Wind speed and direction Air temperature Visibility for aircraft Stage of the tide (i.e., ebb, flood or slack) Sea state Ice conditions Slick movement direction

EMERGENCY ACTION CHECKLIST (Continued)

Notifications	The following notifications are to be initiated by the Facility Supervisor or designee: The Facility Supervisor will contact agencies to report details of the spill, per Figure 1-3. Cook Inlet Pipe Line Company (CIPL) completes written notification as required by agencies. When appropriate, contact local police and fire department (dial 911).
Incident Commander	Notify Cook Inlet Spill Prevention and Response, Inc. (CISPRI) of additional requirements. Activate the ICS/Incident Management Team. Assume control of spill response activities and implement necessary actions. Coordinate with the State and Federal On-Scene Coordinators (SOSC/FOSC) to set up a Unified Command (UC) to manage the spill response.
CIPL Environmental Health and Safety	Make agency notifications.

FIGURE 1-1: SPILL NOTIFICATION FLOWCHART

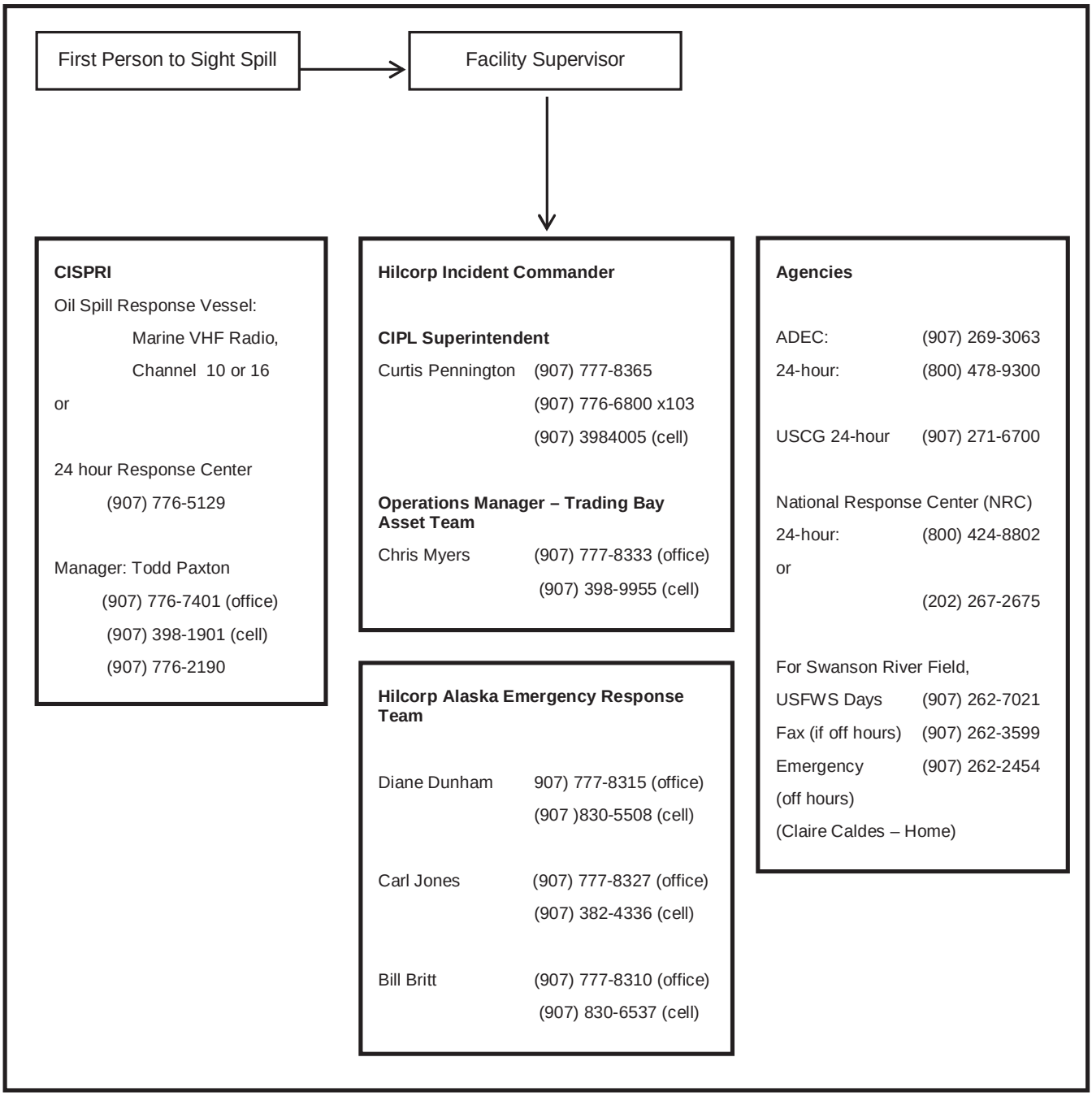
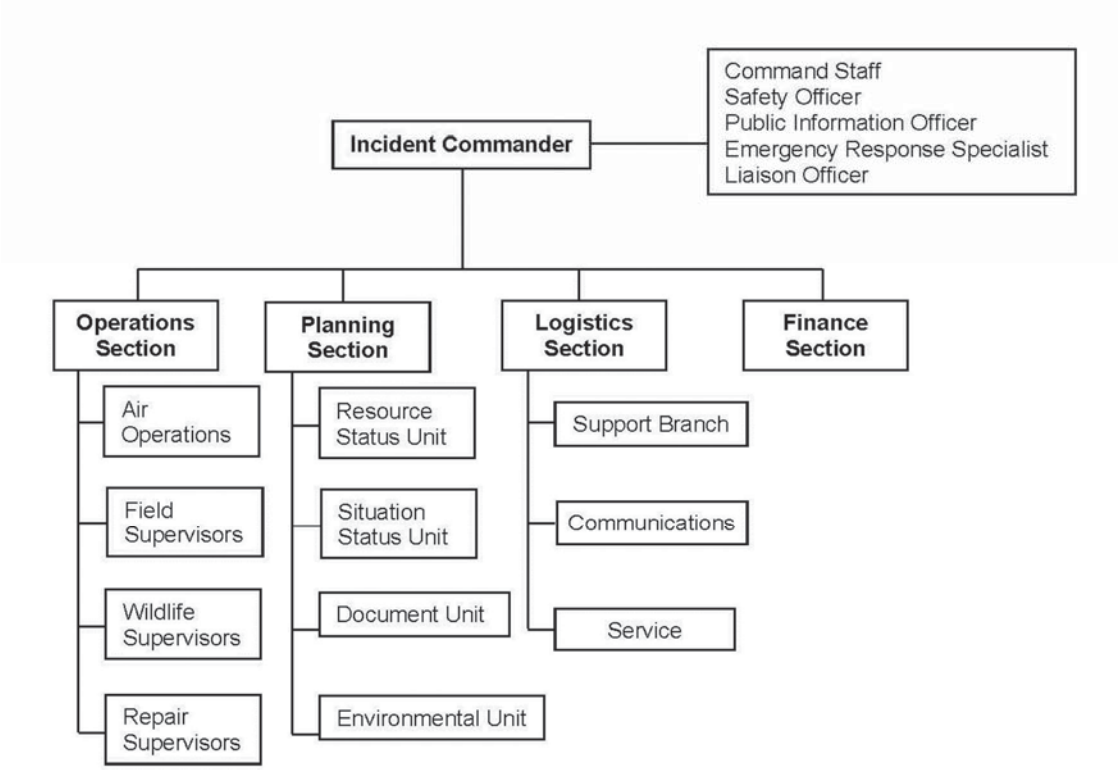


FIGURE 1-2: CIPL INCIDENT COMMAND SYSTEM STRUCTURE



1.2 REPORTING AND NOTIFICATION [18 AAC 75.425(E)(1)(B)]

1.2.1 Internal Notification Procedures

It is CIPL policy for employees and contractors to report spills of oil or hazardous substances on CIPL leases, regardless of size, to a CIPL representative.

Names and telephone numbers for individuals assigned within the ICS are provided in Table 1-1. Figure 1-3 provides the CIPL Spill Report Form for employee and contractor use.

1.2.2 External Notification Procedures

In the event of a significant spill, the IC will activate the response organization and notify the CISPRI, Alaska Department of Environmental Conservation (ADEC), and National Response Center (NRC). Response action contractors may also be contacted depending on spill response needs.

Table 1-2 provides a summary of agency notification requirements.

1.2.3 Qualified Individuals

In the event of a spill requiring notification of the NRC, the Facility Supervisor or designee ensures the designated Qualified Individual (QI) is notified and able to respond.

Prerequisites for designation as a QI, as defined in 33 United States Code (USC) 1321(c)(4), are:

- Available on a 24-hour basis,
- Speak English fluently,
- Located in the United States,
- Trained as a QI and Alternate QI under the response plan, and
- Familiar with, and able to implement, the emergency response plan.

The QI must be trained and authorized to conduct the following responsibilities:

- Activate and engage in contracting oil spill removal organization(s) and other response-related resources,
- Act as a liaison with the FOSC, and
- Acquire funds to carry out response activities.

The QI and alternate QI are not responsible for:

- The adequacy of the response plan prepared by the owner/operator, and
- Acquiring funds for response resources beyond the full authority as designated by the owner/ operator.

TABLE 1-1: ICS PERSONNEL AND TELEPHONE NUMBERS, ICs AND QIs FOR ALL INCIDENTS

CALL PRIORITY	NAME	TITLE	OFFICE	CELLULAR
1	Curtis Pennington	CIPL Superintendent – Trading Bay Asset Team	907-777-8365	907-398-4005
2	Chris Myers	Operations Manager – Trading Bay Asset Team	907-777-8333	907-398-9955

COMMAND STAFF			SECTION LEADERS		
Name	**Office**	**Cellular**	**Name**	**Office**	**Cellular**
Liaison Officer			**Operations Section Chief**		
Pete LaPella	907-777-8331	907-227-3651	Brad Garness	907-776-6800 ext 101	
Betty Veldhuis	907-777-8370		Ken White	907-776-6800 ext 101	
Public Information Officer			Wayne Johnson	907-776-6630	907-398-9942
Lori Nelson	907-777-8392	907-947-3028	John Lee	907-776-6840	907-690-2093
Safety Officer			**Logistics Section Chief**		
Thad Eby	907-777-8317	907-602-5178	Ken Lucas	907-776-6725	907-252-3916
Carl Jones	907-777-8327	907-382-4336	Tiffany Wilkes	907-776-6756	907-690-0598
			Planning Section Chief		
			Bill Britt	907-777-8310	907-830-6537
			Bo York	907-777-8345	907-727-9247
			Finance Section		
			Susan Ellenbecker	907-777-8318	907-529-5196

FIGURE 1-3: SPILL REPORT FORM

Spill or Release				
Field Name	Data			
Short description of spill/release				
Material Released				
Volume Released				
Start Date				
Start Time				
End Date				
End Time				
Describe area impacted by release				
Remedial action/ Steps taken to prevent recurrence				
What was recovered? (fluid, gravel, soil, snow, water) How much? (bags, cubic feet, yards, gallons) When? (Date)				
Disposal Waste Method				
Date of Disposal				
Responsible Party				
In U.S. waters?				
Was clean-up response initiated				
Description of Clean-up Response				
Potential shoreline impact?				
Is there evidence of pre-existing contamination (land only)?				
If Yes, please describe (Required if above is yes)				
Equipment Source				
Process unit/equipment type				
If other equipment type, describe				
Equipment details (e.g. equipment number)				
Equipment Component				
If other equipment component, describe				
Primary Impact	degrees	minutes	seconds	direction
Latitude				
Longitude				
Secondary Impact	degrees	minutes	seconds	direction
Latitude				
Longitude				
Location Description				
Environmental Conditions				
Wind direction (from/to)				
Wind speed				
Wave height (ft//m) min				
Wave height (ft//m) max				
Current direction (from/to) (Required Field if spill to water)				
Current speed (knots)				
Visibility distance				
Cloud ceiling				
Person to contact for further information (name, telephone number)				

Cause & action taken				
Failure description				
Start Date				
End Date				
Root cause analysis performed?				
Causes (required for simple investigation)	☐ Bent	☐ Improper Fit	☐ Over Heated	☐ Sticking
	☐ Communications	☐ Inspection/Quality Control	☐ Over Pressure	☐ Third Party
	☐ Cracked	☐ Intentional Act/Vandalism	☐ Plugged	☐ Thread Damage
	☐ External Corrosion	☐ Internal Corrosion	☐ Procedures	☐ Tripped
	☐ Flow Cut / Erosion / Wear	☐ Loose	☐ Rupture	☐ Vibration / Noisy
	☐ Human Error	☐ Loss of Air / Power	☐ Scored / Cut / Gouged	☐ Weather
	☐ Imbalance	☐ Missing Component	☐ Seized	
	☐ Improper Alignment	☐ Out of Calibration	☐ Supervision/ Work Direction	
Other cause description				
STORMWATER INFORMATION (EFDF, GPTF, Happy Valley, SRF & TBPF only)				
Stormwater Spill No.				
Amount Recovered				
Residual Contamination				
NPDES INFORMATION				
Discharge:				
Type of NPDES Incident:				
Lab Result:				
Last Period of Compliance:				

TABLE 1-2: AGENCY NOTIFICATION REQUIREMENTS

AGENCY	SPILL SIZE	VERBAL REPORT	TELEPHONE NUMBER	ALASKA CONTACT	WRITTEN REPORT
NRC Notifies all appropriate federal agencies	Any size	Immediately	(800) 424-8802 (24-hour)	24-hour line	Form is completed during telephone notification.
ADEC Central Alaska Response Team	Water: Any spill Land: >55 gal outside impermeable area >55 gal within secondary containment 10 to 55 gal 1 to 10 gal	Immediately 48 hours 48 hours within 30 days	(907) 269-3063 (907) 269-7648 (fax) or (800) 478-9300 (M-F after 5 p.m. and Saturday and Sunday) or (907) 262-5210 x234	ADEC fax number or State Troopers or Kenai Office	Required within 15 days after spill containment and cleanup are completed; or, if no cleanup occurs, within 15 days after discharge or release. Monthly written report must be submitted for oil spills of 1 to 10 gal to land.
EPA	Any size to navigable U.S. waters (includes tundra) or to land that may threaten navigable waters	Immediately	(206) 553-1846		For a facility requiring an SPCC Plan, if the spill is 1,000 gal or more or if it is a second spill > 42 gal in 12 months.
AOGCC	Any spill greater than 10 bbl or resulting in facility shutdown	Immediately	(907) 793-1326 business hours (907) 659-3607 after business hours		Within 5 days of loss.
Kenai Peninsula Borough	All significant spills	Immediately	(907) 262-4910 (work) (907) 398-3533 (cell) (907) 714-2395 (fax)	Eric Mohrmann	Written report requested. Include contact information.
Matanuska-Susitna Borough	Oils, drilling fluids, glycols, hazardous materials, produced water, DOT pipeline	Immediately			15 days if verbal is required.
ADF&G	Any spill impacting Trading Bay State Game Refuge or that is an immediate threat to fish and wildlife	Immediately	(907) 465-4100 switchboard (907) 529-6258 (cell) (907) 267-2218		

TABLE 1-2: AGENCY NOTIFICATION REQUIREMENTS (CONTINUED)

AGENCY	SPILL SIZE	VERBAL REPORT	TELEPHONE NUMBER	ALASKA CONTACT	WRITTEN REPORT
ADNR (only if spill is on state land)	10 to 55 gal 1 to 10 gal <1 gal to ice road or pad <1 gal to gravel	Within 48 hours None None None	(907) 269-8400 main office (907) 269-8503 Office of Mining, Land, and Water (907) 451-2751 (fax)		Within 15 days of end of cleanup. Compile in a written monthly report. None. None.
SPCO/DOT	Any size from a regulated pipeline	Immediately	(907) 269-6403 (907) 269-6880		
CIRI	All spills	Not required			Immediately
USFWS	Any size that poses a threat to fish and wildlife	Immediately (courtesy call)	(907) 262-7201 (907) 262-2824 direct (907) 262-2454 (907) 262-3599 (fax) (907) 283-3341	Kenai Office	Required within 15 days for all spills except those <= 10 gallons of glycol, produced water, or hydrocarbons on disturbed land, which can be submitted by the 15th of the following month. All spills on Federal land must be reported.
DOT	For a DOT-regulated pipeline: <5 gal; no report required For release <5 bbl resulting from pipeline maintenance activity	NRC will contact			Required within 30 days on DOT Form 7000-I.
USCG	Any size in or threatening navigable waters	NRC will contact but would like a courtesy call	(907) 271-6700 (24-hour) (907) 271-6751 (fax) (907) 283-3292	Anchorage Kenai	Not required but is requested.

General Notes:
No report is required for a release of <5 bbl resulting from a pipeline maintenance activity if the release:

- Is not otherwise reportable;
- Did not result in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or
- Is confined to company property or pipeline right-of-way and promptly cleaned up.

The operator shall give verbal notice if the release:

- Caused a death or personal injury requiring hospitalization;
- Resulted in either a fire or explosion not intentionally set by the operator;
- Caused estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator and/or others exceeding $50,000;

- Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or
- If, in the operator's judgment, it was significant even though it did not meet the criteria.

1.2.4 Written Reporting Requirements

Written notifications and reporting may be required by government agencies depending on the type and amount of material released. CIPL and CISPRI utilize the ICS and forms as defined in the U.S. Coast Guard (USCG) Incident Management Handbook (IMH), which is designed to assist USCG personnel in the use of the National Incident Management System (NIMS).

Immediate notifications are verbally made to the NRC and other agencies. The verbal report must contain the information detailed on the NRC Online Report Form (www.nrc.uscg.mil/report.html) to the extent known at the time of initial notification.

1.3 SAFETY [18 AAC 75.425(E)(1)(C)]

1.3.1 General Procedures

In the event of a spill response requiring facility personnel or others, the CIPL Site Safety Officer will develop a site-specific safety plan, in accordance with Title 29 of the Code of Federal Regulations (CFR) Part 1910, Section 120 (29 CFR 1910.120).

Crude oil and diesel are the primary constituents of potential concern. Copies of Material Safety Data Sheets (MSDS) for these substances are available through CIPL's intranet.

The Site Safety Officer is responsible for health and safety concerns in the event of a spill response. The Site Safety Officer will perform a site characterization to determine risks and implement appropriate controls to ensure site safety.

CISPRI's safety procedures are summarized in Section CI-S of the CISPRI *Technical Manual*.

1.3.2 Spill Response Procedures

General safety precautions for an incident-specific response:

- Secure the area.
- Monitor vapor release from spill and eliminate ignition sources, where appropriate.
- Work upwind of the spill, if possible.
- Monitor oxygen (O_2) levels, particularly for spills in poorly ventilated areas. Oxygen levels should be between 19.5% and 23.5%.
- Monitor for hydrogen sulfide (H_2S) in crude oil spills. The short-term exposure limit (STEL) for H_2S is 15 parts per million (ppm).
- Obtain and use personal protective equipment (PPE), including respiratory, skin, eye, and splash protection.
- Make sure supervisors know where you are working.
- Monitor other workers for signs of heat stress or hypothermia.

CISPRI's site safety plan is summarized in Section CI-S of the CISPRI *Technical Manual*.

1.3.3 Air Monitoring Equipment

The following air monitoring equipment and calibration accessories are stored in the Industrial Building at Drift River Terminal (DRT):

- 4-Industrial Scientific Model M-40

1.3.4 Personal Protective Equipment

Included below is a list of the PPE that CIPL workers are required to wear if they are involved in cleanup activities:

- Safety glasses, goggles, or face shields;
- Hard hats;
- Steel-toed oil-resistant work boots;
- Polyethylene or other appropriately coated Tyvek® suits or rain gear to maintain the cleanliness of the worker's gear and prevent skin contact with the oil product;
- Respirators, as required by health and safety monitoring;
- Oil-resistant gloves/mittens;
- Personal flotation devices, as required by the specific work locations and tasks; and
- Other clothing appropriate to the environmental conditions.

1.3.5 Evacuation Routes and Plans

If necessary, evacuation will be directed by the IC and/or the Facility Supervisor.

Evacuation from offshore facilities will be performed according to company procedures, as summarized below. Evacuation craft will be used by the following priority when possible:

- Helicopter
- Workboat
- Self-launching craft

Evacuation drills will be conducted that include: head-counting, loading, and checking communications for all personnel at the work site.

1.4 COMMUNICATIONS [18 AAC 75.425(E)(1)(D)]

1.4.1 General

Table 1-3 provides a summary of communication equipment for each facility, selected telephone numbers, and radio frequencies. All field facilities are equipped with either intercom or hand-held radios for on-site communication.

1.4.2 CISPRI's Communication System

CISPRI provides an additional network of communication during response situations, and these resources are summarized in the CISPRI *Technical Manual* (CI-LP-2). In the event of a spill incident that requires CISPRI involvement, CIPL will interface with CISPRI's communication network.

As described in the CISPRI *Technical Manual* (CI-LP-2), CISPRI Command Post Communications System is divided into four networks:

- Response very high frequency (VHF) Wide Area Repeater Network
- VHF Marine “Coast Station” Network
- Ground to Air (G/A) Network
- Extended (alternate) Network

The VHF marine radio network is used to coordinate operations in the Upper Cook Inlet area between CISPRI and vessels of opportunity that are contracted for spill cleanup support. CISPRI operates two remote-control VHF marine base stations in the Upper Cook Inlet area. These stations can only be accessed from the Incident Command Post (ICP) using special dial-up tone-remote control units. These multi-channel stations are equipped with marine channels 10, 11, 16, 22, and 80.

A VHF marine mobile radio is installed on each vessel that is operated by CISPRI. Five hand-held VHF marine radios capable of operating on any marine channel are maintained by CISPRI.

CIPL can contact marine vessels from both DRT and the platform using maritime frequencies 156.5 megahertz (MHz) and 156.8 MHz. These interface with marine channels 10 and 16.

TABLE 1-3: CIPL COMMUNICATIONS SUMMARY

LOCATION	CONTACT INFORMATION	
Anchorage Office	Telephone Fax	907-777-8318 907-243-4231
Drift River Supervisor	Telephone	907-776-6800 ext 103
Drift River Operations	Telephone Fax	907-776-6800 ext 100 907-776-6804
Drift River Radio Room	Telephone Operations VHF Narrowband Marine VHF Aviation VHF	907-776-6800 ext 100 TX 152.270 MHz RX 157.530 MHz PL 110.9 Hz Channel 16[a] 122.7 MHz
Offshore Platform	Telephone Operations VHF Narrowband VHF Marine VHF	907-776-6800 ext. 154 TX 152.3675 MHz RX 157.6275 MHz PL 103.5 Hz Channel 16 or 10
West Foreland	Telephone Operations VHF Narrowband VHF	907-776-6800 ext 150 TX 152.450 MHz RX 157.710 MHz PL 136.5 Hz
Granite Point	Telephone Operations VHF Narrowband VHF	907-776-6811 TX 152.4125 MHz RX 157.6725 MHz PL 131.8 Hz
Contractor Helicopter	Operations VHF Marine VHF	Same as hand-held FRQ Channel 1,2,3 and 4 MHz 122.7 MHz
Marine Vessels	Marine VHF	Channel 16[a]
Portable	Hand-held VHF Radio[b]	CH-1 DRT FRQ CH-2 PLT FRQ CH-3 WFPS FRQ CH-4 GPTF FRQ Marine VHF 10 and 16

Notes:

a. Standby/hail on Channel 16 (156.8 MHz) and communicate on Channel 10 (156.5 MHz).

b. Additional hand-held radios are stored at Drift River Operations Center. Range is typically 5 miles or more.

1.5 DEPLOYMENT STRATEGIES [18 AAC 75.425(E)(1)(E)]

1.5.1 General

In this Oil Discharge Prevention and Contingency Plan (ODPCP), “mobilization” means readying for travel; “deployment” means readying for use at the site; and “travel time” is the period between mobilization and deployment.

The CIPL IC will assemble and activate necessary personnel and equipment in conjunction with CISPRI and/or a response action contractor.

1.5.2 Transport of Resources

Equipment for response activities on the west side of Cook Inlet may be mobilized by either marine vessel or aircraft (fixed-wing or helicopter). Additional information on response times from Nikiski to specific facilities is provided in Table 1-4.

Staging locations and capabilities in the Cook Inlet area are summarized in Table 1-5.

CISPRI barges are available within 1 to 2 days to transport equipment from Nikiski to the west side of Cook Inlet. The large barges, with 12,500 barrel (bbl) and 59,000 bbl capacities can only tie up at the Tyonek Dock and the Christy Lee Platform at DRT. The smaller 249 bbl and 100 bbl capacity barges can be landed on any beach at high tide, allowed to go dry, and refloated at high tide. During winter months, vessels and equipment are also staged at Seldovia. Air and marine transit times from Seldovia are essentially the same as from Homer.

Granite Point Tank Farm (GPTF) is on a road network on the west side of Cook Inlet that connects with Shirleyville. However, there is limited road access to the beach areas between Shirleyville and Beluga. CISPRI barges are not suitable to transport large items of equipment to GPTF. Large equipment, such as Supersuckers®, is transported to GPTF via a commercial barge service.

1.5.3 Transporting Equipment and Personnel in Adverse Weather

For the purpose of this ODPCP, “adverse weather” is defined as weather conditions that may act against or abnormally hinder response efforts.

All response equipment is employed year-round in Cook Inlet by CISPRI. Access to staging areas in adverse weather will be accomplished by helicopter, fixed-wing aircraft, or marine vessels. See CISPRI's *Technical Manual* CI-LP-1(A) for detailed information on CISPRI’s capabilities during adverse weather. During winter months, response equipment will be stored at Seldovia.

TABLE 1-4: RESPONSE TIMES FROM CISPRI (IN HOURS)

FACILITY	GOOD WEATHER			ADVERSE WEATHER		
	AIRCRAFT	BOAT	ROAD	AIRCRAFT	BOAT	ROAD
Offshore Facilities						
Christy Lee Platform	0.25	2	---	0.50	4	---
Westside Cook Inlet Onshore Facilities						
GPTF DRT	1 to 3 0.25	5 to 48 2	---	3 to 4 0.50	12 to 56 4	---

TABLE 1-5: SUMMARY OF STAGING CAPABILITIES IN THE COOK INLET REGION

LOCATION	AIRPORT FACILITY	PORT FACILITY	COMMENTS
Anchorage	Merrill Field for light aircraft Ted Stevens Anchorage International Airport for jet traffic, open 24 hours per day with 10,900-ft runway	Small boat harbor and supplies. Deep-draft dock, fuel, supplies, and crane with 37-acre staging area. 52,000 square foot warehouse.	Large tide change can be experienced. Sea ice December through March.
Beluga	Private airport with 5,000-ft gravel runway	N/A (not applicable).	Housing available.
DRT	4,300-ft gravel runway	60-ft deep offshore loading platform. Platform headings are 35° and 215°.	Helicopter deck and living quarters are available. Breasting and mooring dolphins, privately maintained lights on mooring dolphins mark extremities of terminal. Two 30-inch oil lines lead from a crude oil tank farm onshore to the platform.
English Bay	1,800-ft gravel runway	N/A	N/A
Granite Point (Shirleyville)	5,000-ft gravel runway, maintained year-round Heliport landing facilities at the HAK Tank Farm	No formal barge landing facility. Barges can run up on beach and be released with tide cycles.	Ice conditions prohibit barge landings from November to March. Tide ranges 21 ft and currents range from 2.0 to 3.9 knots. Alternate port facility north at Tyonek. Housing is available for 30 to 40 personnel at Shirleyville Lodge.

TABLE 1-5: SUMMARY OF STAGING CAPABILITIES IN THE COOK INLET REGION (CONTINUED)

LOCATION	AIRPORT FACILITY	PORT FACILITY	COMMENTS
Homer	7,400-ft asphalt runway Scheduled air service available to Anchorage and air taxies to Seldovia and Port Graham Storage Tanks	Deep-draft pier and small boat harbor. Pipelines extend from the wharf to storage tanks in rear, total capacity is 732,250 bbl; water is at pier. The small boat harbor is protected by the city pier. A light on the outer end of the breakwater marks the entrance. The controlling depth is about 12 ft in the entrance channel. 30-acre staging area. Cold and gear storage.	From January to March, ice floes interfere with operations of Homer City Pier. During heavy ice floes, cargo barges use a wharf in the small boat harbor. The harbor has moorage for 450 vessels with some transient spaces. Electricity on floats; diesel, gasoline, and water available on floating fuel pier at the southeast end. A 100-ft grid, 168-ft grid, and launching ramp are available. Owned by the state, operated by the city. Water facilities are operated by the City of Homer. Small boat harbor is administered by the Harbormaster (907) 235-3160, fax (907) 235-3152. Harbormaster's office monitors VHF-FM Channel 16 (156.80 MHz), Channels 10 (156.50 MHz) and 68 (156.425 MHz) are used as working frequencies.
Kenai	7,500-ft asphalt runway	City dock, 600 ft x 600 ft open storage. 5 wharves for barges and fishing Depth of channel is 8 to 10 ft.	Wharf dry at low tide. 8-ton crane. Gasoline, diesel fuel, and water are available for small boats at Fisherman's Packing, Inc. piers.
Nikiski	5,600-ft gravel runway 2,200-ft gravel runway Heliport facility	3 deep-draft piers.	Owned and operated by Phillips and Kenai Pipe Line. Tidal range of 20.7 ft. Tidal currents of about 4 knots.
Nikiski (Rig Tenders)	N/A	600-ft dock face. 10-ft updraft at 0.0 tide. 150-ton crawler-type crane. Fuel/electricity supplies available year-round.	Owned and operated by Crowley Maritime Corp. Rig Tenders Dock continuously monitors VHF-FM Channel 10 (156.50 MHz). Range of tide is 20.7 ft, and tidal currents run from 3 to 4 knots. Ice floes in January and February pose a problem.
Nikiski OSK/Arness Dock	Heliport operated by Era Alaska Helicopters above the dock	Primary dock used by CISPRI. Cranes, fuel, electricity, water, and supplies are available with prior arrangements.	Owned and operated by OSK. Dock continuously monitors VHF Channel 10 and 16. The range of the tide is 20.7 ft, and tidal currents run from 2 to 4 knots. Ice floes in January and February pose a problem due to tidal limitations. Office at (907) 776-5551.

TABLE 1-5: SUMMARY OF STAGING CAPABILITIES IN THE COOK INLET REGION (CONTINUED)

LOCATION	AIRPORT FACILITY	PORT FACILITY	COMMENTS
Ninilchik	2,500-ft gravel runway	The small boat harbor is 400 ft long X 125 ft wide and is 400 ft above the mouth of the Ninilchik River. The boat basin has one floating pier that is removed in the winter. No supplies or repair services are available.	The jetted entrance channel has been reported to dry at a 9 ft tide but has controlling depth of 8.7 ft at MHW; the small boat basin inside retains a least depth of about 7 ft and is dredged annually. Because of the height of the basin channel and the swift current, entrance should not be attempted until the tide is at least 16 ft above datum.
Seldovia	2,600-ft gravel runway, unlighted	City dock emergency fuel/ electricity. Ferry Dock.	21-ft controlling depth. Anchorage for boats up to 300 ft long. Small boat harbor for 100 boats. Haul-out facility available.
TBPF	4,500-ft gravel runway	Small (100 bbl and 249 bbl) barge landing only.	Approximately 40-acre storage area. Camp house (80 to 100 people).
Tyonek	3,300-ft gravel runway	Dock.	Barge landing, housing, and storage.

Key: bbl = barrel; ft = foot; HAK = Hilcorp Alaska, LLC; MHW = mean high water; TBPF = Trading Bay Production Facility.

1.6 RESPONSE STRATEGIES [18 AAC 75.425(E)(1)(F)]

1.6.1 Procedures to Stop the Discharge

In the event of a discharge, the Facility Response Team would immediately attempt to isolate the source. For example, a release from a pipeline or tank would result in immediate shutdown of fluid transfer and closing of related pumping units and valves. Specific procedures are detailed in the spill scenarios.

1.6.2 Fire Prevention and Control

Fire-fighting equipment is listed in Section 3.6. In the event of a release of oil, the Facility Response Team will perform the following initial response actions:

- Shut down electrical power in affected area to reduce the risk of explosion or fire.
- Use intrinsically safe radio gear.
- Consider shutting down the pipelines into DRT.
- Isolate the pumping units, close all valves, and cool equipment, as necessary.
- Measure lower explosive limit (LEL) and O_2 levels within the affected area.
- Mobilize fire-fighting equipment.

On the platform when the system is armed and activated by fire, all 20 carbon dioxide (CO_2) bottles are automatically discharged, which will cause the generator to shut down. When this occurs, the fire alarm indicator (visual) flashes on the computer in the Operator's Control Room and additionally will set off an audio on the Supervisory Control and Data Acquisition (SCADA) panel.

In the White Building, when the White Superior engines are running (during vessel loading), the Fire Eye System (when activated by fire) will shut down the White Superior engines and close the suction and discharge valves automatically. Audio and visual alarm signals are indicated in the Operator's Control Room on the SCADA panel.

Activation of the Fire Eye System at the West Foreland Pump Station (WFPS) will cause a station lock-out, which shuts down the motors and pumps and closes the station valves. The Operator Control Room computer will give visual flashes, which indicate a station lock-out. When activated, this system has to be physically checked and manually reset.

1.6.3 Discharge Tracking

CISPRI has developed tactics to conduct tracking and surveillance of an oil spill during a response. The tactics use a combination of visual observations, computer modeling, and remote-sensing techniques to produce data on the actual location and the projected direction of the released oil. Tactics associated with tracking and surveillance include the following:

- CI-TS-1, Aerial Surveillance: This tactic describes the use of visual observations from aircraft (fixed-wing or helicopter) to locate oil on the water’s surface.

- CI-TS-2, Tracking Buoys: This tactic describes the use of floating electronic tracking buoys designed to drift with the oil and automatically transmit their positions to the CISPRI Command Post or other designated sites.

- CI-TS-3, Detection and Delineation of Oil: This tactic describes the methods and tactics to be used when attempting to locate and delineate a large spill on land.

- CI-TS-4, Spill Volume Estimation on Water: This tactic describes several methods for estimating spill volume, including the use of spilled oil color for estimating the thickness of the oil layer on the water and therefore the amount of oil spilled.

In the event that released oil enters Cook Inlet, the trajectory of the released oil would be estimated as the vector sum of 3% of the wind speed and the surface current. The Cook Inlet surface current is dominated by tidal flow, which generates three major rip currents with roughly north-south axes. The tidal rips have speeds of up to 6 knots, and they account for the majority of the volume transport in and out of Cook Inlet (Johnson and Okkonen 1999). Consequently, under normal wind conditions, the trajectory of released oil would follow tidal currents.

1.6.4 Protection of Environmentally Sensitive Areas

CIPL uses guidelines outlined in the CISPRI *Technical Manual* (CI-SA-1) and the Cook Inlet Subarea Contingency Plan to identify and prioritize spill response activities in environmentally sensitive areas (ESA). Section 3.2, Receiving Environment, discusses ESAs that could be impacted by spills. These include the Trading Bay State Game Refuge, the Redoubt Bay Critical Habitat Area, and several anadromous streams.

Generalized tactics used to protect the identified ESAs are described in the CISPRI *Technical Manual*. Site-specific tactics are described in the Cook Inlet Geographic Response Strategies (GRS) and the scenarios within this section.

In the event of a major release, the UC prioritizes potentially affected ESAs and recommends incident-specific response strategies.

1.6.5 Temporary Storage and Ultimate Disposal

The method of disposal for oil and contaminated materials from oil spill recovery operations first must be approved by state and federal agencies. At the time of the spill, the Operations Section Chief, in consultation with the Environmental Unit Leader, will determine a reuse, recycle, or disposal method best suited to the condition of the oil, the degree of contamination of recovered debris, and the logistics involved. See Tactics CI-WM-1 through CI-WM-7 in the CISPRI *Technical Manual*. Application for agency approvals will be completed before the method of disposal is used.

1.6.6 Wildlife Protection

The Cook Inlet Subarea Contingency Plan is the primary source for wildlife habitat information in the area surrounding CIPL facilities. The Cook Inlet Subarea Contingency Plan includes maps detailing aquatic farms, biologically sensitive areas, Alaska Department of Fish and Game (ADF&G) Most Environmentally Sensitive Area sites, and National Oceanic and Atmospheric Administration (NOAA) Environmentally Sensitive Index (ESI).

CISPRI has tactics developed for wildlife response during a spill in Cook Inlet that are designed to protect wildlife and provide initial treatment of oiled wildlife during an oil spill response. The objectives of the wildlife program are:

- Hazing wildlife away from spilled oil or response operations,
- Capturing oiled wildlife and transporting them to treatment facilities, and
- Recovering dead wildlife.

State and Federal agencies play a critical role in the event of a wildlife response. The responsibilities of the wildlife trustee agencies in the event of an oil spill are outlined in the Alaska Regional Response Team (ARRT) Wildlife Protection Guidelines for Alaska.

1.6.7 Shoreline Cleanup Plans

In the event of a spill that impacts shorelines, spill responders must establish priorities for shoreline protection and cleanup resources. The Shoreline Cleanup Assessment Technique (SCAT) guides this prioritization. SCAT uses standardized procedures and terminology to document shoreline oiling. If a UC is mobilized, SCAT teams are managed by the Shoreline Group Supervisor in the Operations Section. The SCAT team's purpose is to identify and describe human use, ecological and cultural resources, and other factors that may place constraints on cleanup operations.

Cook Inlet has a great variety of shoreline types ranging from mud flats, gravel/sand beaches, and sheltered beaches to exposed bedrock. Detailed mapping of shoreline characteristics has been conducted by NOAA and is publicly available. The NOAA ESI data identify the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human use resources. This data would be available to SCAT teams in the event of a spill.

Once the priorities have been established, CISPRI has several shoreline response tactics, including manual and mechanized oil removal techniques. These techniques would be supported by CIPL and CISPRI personnel and equipment.

1.6.8 Scenarios

Scenarios and strategies are developed in accordance with Title 18 of the Alaska Administrative Code (AAC), Chapter 75, Part 425 (18 AAC 75.425(e)(1)(F) and 18 AAC 75.445(d)). They describe equipment, personnel, and strategies that could be used to respond to an oil spill. The scenarios describe oil spill recovery by 100% mechanical means, as required by 18 AAC 75.425(e)(1)(F)(vii).

Although some equipment is named, it may be replaced by functionally similar equipment in the future. The response timelines are for illustration only. They do not limit the discretion of the people in charge of the spill response to select a specific sequence or take the time they deem necessary for an effective response without jeopardizing safety.

Actual response performance equal to the scenarios is not guaranteed. Actual responses in an oil spill emergency depend on personnel safety considerations, weather and other environmental conditions, agency permits and priorities, and other factors. In an accident, considerations to ensure the safety of personnel will be given highest priority. The scenarios assume the State and Federal On-Scene Coordinators (SOSC/FOSC) and other agency officials will immediately grant the required permits.

The following three response scenarios show that the plan meets the Response Planning Standards (RPS) described in Part 5. The following response strategy was requested by ADEC to illustrate a response in a specific receiving environment (Cook Inlet). The scenarios presented in this section include the following:

- Scenario #1: Oil Storage Tanks Rupture;
- Scenario #2: Pipeline Rupture at Middle River Crossing – Summer;
- Scenario #3: Pipeline Rupture at Middle River Crossing – Winter; and
- Response Strategy #4: Fuel Transfer at Christy Lee Platform.

SCENARIO 1

OIL STORAGE TANKS RUPTURE

TABLE 1-6: SCENARIO CONDITIONS OIL STORAGE TANKS RUPTURE

PARAMETER	PARAMETER CONDITIONS
Spill Location	Tanks 3 and 4 at the DRT
Date	March 15, 12:00 p.m.
Source and Cause of Spill	Crude oil storage tanks rupture
Quantity of Oil Spilled	Initial RPS volume is 540,000 bbl, of which 166,674 bbl breaches secondary containment as the adjusted RPS volume. No crude oil reaches open water.
Oil Type	Crude Oil
Weather and Visibility	Overcast, light snowfall with 2 to 3 ft snow cover, 25°F
Wind Direction and Speed	Wind from the north at 5 knots
Spill Trajectory	The majority of the crude oil is contained within the secondary containment dike and liner. The Spine Road provides a barrier to the southwest. Approximately 166,674 bbl of crude oil escapes secondary containment. The majority of the 166,674 bbl spreads downgradient, toward the south of the containment area. The released crude flows to natural depressions. Most of the crude oil is contained in snow cover and gravel. No crude oil reaches Rust Slough or Cook Inlet.

TABLE 1-7: RESPONSE STRATEGY – OIL STORAGE TANKS RUPTURE

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(i) Stopping Discharge at Source	The entire contents of Tanks 3 and 4 are lost. Most of the oil stays within the lined secondary containment; however, 166,674 bbl breaches secondary containment. To prevent further flow of oil into the tank, the pipeline is immediately shut down, and valves on piping leading to the ruptured tanks are closed. To minimize the spreading of released oil, the 30-inch diameter pipes connecting secondary containment areas are confirmed closed. Drainage ditches located on the east and west sides of the tank farm are blocked. Within 2 hours, a crew begins stabilizing the secondary containment area to prevent further escape of fluids.	Not Applicable
(ii) Preventing or Controlling Fire Hazards	The Immediate Response Team (IRT) immediately shuts down electrical power and pipelines flowing into the DRT, isolates the pumping units, closes all valves, and cools equipment if necessary. Throughout the first few hours of the spill, the SOSC/FOSC, with the assistance of the Site Safety Officer, verifies that sources of ignition are shut down or removed from the area. The IRT is on the scene with equipment and personnel to suppress the threat of a fire or explosion. The Site Safety Officer and SOSC/FOSC perform a visual inspection of the tank and a site safety assessment. The IRT uses intrinsically safe hand-held radios. After declaring the area clear, the Safety Officer prepares a site-safety plan including PPE requirements. Access to the spill site is carefully controlled. Monitoring protocol is established by the Site Safety Officer for all work areas to ensure personnel protection.	CI-S-1 through S-6
(iii) Surveillance and Tracking of Oil; Forecasting Shoreline Contact Points	Once the source is controlled, the spill area is delineated. The spill is entirely on land and contained within the boundaries of the DRT. Tracking of the spill location is accomplished by continuous direct visual means. As a precaution, an aircraft is dispatched to monitor for oil in the surrounding area. No migration beyond the facility boundaries is detected.	CI-TS-1, CI-TS-3

TABLE 1-7: RESPONSE STRATEGY – OIL STORAGE TANKS RUPTURE (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(iv) Protection of Environmentally Sensitive Areas and Areas of Public Concern	The DRT is located immediately south of Redoubt Bay Critical Habitat Area. Rust Slough is an anadromous stream. Other areas of concern and potential mitigation measures are identified in the Cook Inlet Subarea Plan (Central Cook Inlet Region) and the Drift River GRS.	CI-SA-1 CI-SA-2
	The area is monitored starting on Day 2 to ensure birds and mammals do not enter the spill area. Bird capture and rehabilitation personnel from the International Bird Rescue (IBR) are notified and put on standby for potential activation. Additional information is provided in Section 3.10.	CI-W-1
	Protection of cultural resources will be identified and managed by the Alaska Department of Natural Resources (ADNR).	CI-SA-3
	Task Force 1: Containment	
	By Hour 3, crews deploy on-site front-end loaders to construct containment berms along the perimeter of the spill. The berms are designed to reduce the spreading of oil and are positioned to take advantage of natural depressions. The berms are constructed of snow and gravel, as available.	CI-IL-1
	The berms are reinforced throughout the recovery process. Liner, tidal-seal boom, and/or large diameter hoses are deployed as necessary.	
	An on-site backhoe attempts to excavate trenches immediately uphill of the containment berms. The trenches allow oil to accumulate in areas where it can be recovered by skimmers and pumps.	CI-IL-2
	Oil does not reach Rust Slough or Cook Inlet.	
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures**	By Hour 2, a staging area and command post are setup at the DRT. CISPRI response personnel and equipment are mobilized from CISPRI headquarters in Nikiski.	
	Task Force 2: Liquid Recovery (from tundra)	
	By Hour 4, crews begin deploying skimmers and pumps inside the bermed area to begin recovery. Crews use a combination of skimmers and pumps to recover released oil and transfer it to temporary storage tanks.	CI-IL-1
	Task Force 3: Liquid Recovery (from secondary containment)	
	Crews deploy the on-site vacuum system, large centrifugal pumps, and a Crucial disc skimmer to recover oil pooled within the tank farm secondary containment tank farm.	CI-IL-2
	See Table 1-8 for recovery capacity rates. The recovered fluids are temporarily stored in portable tanks. The recovered fluid is then transferred to Tanks 1 and 2 for hydrocarbon recycling.	
	Task Force 4: Oiled Snow Recovery	
	By Day 11, after liquids are removed, crews excavate the contaminated snow and gravel. Contaminated snow and gravel outside of containment is collected using a dozer, front-end loader, and dump truck. The contaminated snow and gravel inside the containment area is collected with hand-shovels off the liner. Excavated material is transported to temporary, lined storage pits for waste classification and disposal or remediation.	CI-IL-9

TABLE 1-7: RESPONSE STRATEGY – OIL STORAGE TANKS RUPTURE (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(vii) Lightering Procedures	Not Applicable	Not Applicable
(viii) Transfer and Storage of Recovered Oil/ Water; Volume Estimating Procedure	Recovered crude oil from the vacuum system is offloaded into Tank 1 or 2 for hydrocarbon recycling. Volume of recovered product would be measured using tank fluid levels. Volume from the accumulation area and secondary containment area is estimated from fast tanks and pumping rates. The Operations Section personnel take measurements or estimate volumes.	CI-WM-2
(ix) Plans, Procedures, and Locations for Temporary Storage and Disposal	The recovered fluids are transferred from temporary storage tanks to Tanks 1 and 2 for hydrocarbon recycling. Solid oily wastes, such as used oily sorbents, are collected in plastic bags or other leak-proof storage containers and disposed by incineration or may be managed as hazardous waste. Depending on volume, oily snow, gravel, or soil is stockpiled in a bermed, lined area at the DRT tank farm for hazardous characterization. In the first days of the response, the lined secondary containment areas for Tanks 1 and 2 could be used for temporary storage. During the response, additional lined containment cells would be constructed in the containment areas for Tanks 5 and 6. The material will then be shipped to Anchorage Sand and Gravel or other approved off-site treatment or disposal facility.	CI-WM-1, 2, 4 and 7
(x) Wildlife Protection Plan	Resources at risk are primarily birds. The wildlife protection strategy is implemented. A wildlife hazing team deployed on Day 1 continues through the cleanup activities. In consultation with IBR, a capture team monitors the spill area on foot and captures oiled animals from Day 1 through the cleanup period. In the event a wildlife recovery and rehabilitation program becomes necessary, responders will refer to the ARRT Wildlife Protection Guidelines for implementation.	CI-W-1
(xi) Shoreline Cleanup Plan	No shorelines are impacted.	

TABLE 1-8: OIL TANKS RUPTURE OIL RECOVERY AND HANDLING CAPABILITY

A	B	C	D	E	F	G
SPILL RECOVERY TACTIC	**NUMBER OF SYSTEMS**	**RECOVERY SYSTEM**	**RECOVERY RATE (BOPH OR YD^3 PER HOUR)**	**MOBILIZATION AND TRANSIT TIME TO SITE (HOURS)**	**OPERATING TIME (HOURS PER 24-HOURS)**	**HANDLING CAPACITY (BBL OR YD^3 PER DAY) (B X D X F)**
Task Force 2	1	60-inch Manta Ray; Pump, Hoses, Tank	71.6[a]	<5	20	1,432
Task Force 2	1	54-inch Manta Ray; Pump, Hoses, Tank	43[a]	<5	20	860
Task Force 2	2	48-inch Manta Ray; Pump, Hoses, Tank	20	<5	20	800
Task Force 2	6	Rope Mop, Hoses, Tank	1.25[a]	<5	20	150
Task Force 2	1	3-inch Multiquip Diesel Centrifugal Pump; Hoses; Tank	571	<1	20	11,420
Task Force 3	1	3-inch Multiquip Diesel Centrifugal Pump; Hoses; Tank	571	<5	20	11,420
Task Force 3	1	4-inch Gorman Rupp Diesel Pump; Hoses	1,034	<1	20	20,680
Task Force 3	1	4-inch ACME Diesel Pump; Hoses	914	<1	20	18,280
Task Force 4	2	Dump Truck (2); Dozer (2); Front-end Loader (2)	28 yd^3 [b]	<1	20	1,120 yd^3

Notes:

a. Recovery rates for skimmers are de-rated 20%. Pump rates are not de-rated because they are transferring fluids.

b. Dump truck recovery calculation: Tc/(Lt+Tt+Ut) =

12 yd^3/[0.25 hours + 0.5 miles from Tank 3 to Tank 2 * 2 trips/10 mph + .08 hour] = 28 yd^3/hour

Tc = Dump Truck Capacity = 12 yd^3 , Lt = Load Time = 0.25 hour, Tt = Travel Time = 0.5 miles * 2 trips/10 mph = 0.1 hour, Ut = Unload Time = 0.08 hour

Key: boph = barrels of oil per hour; mph = miles per hour; YD^3 = cubic yard.

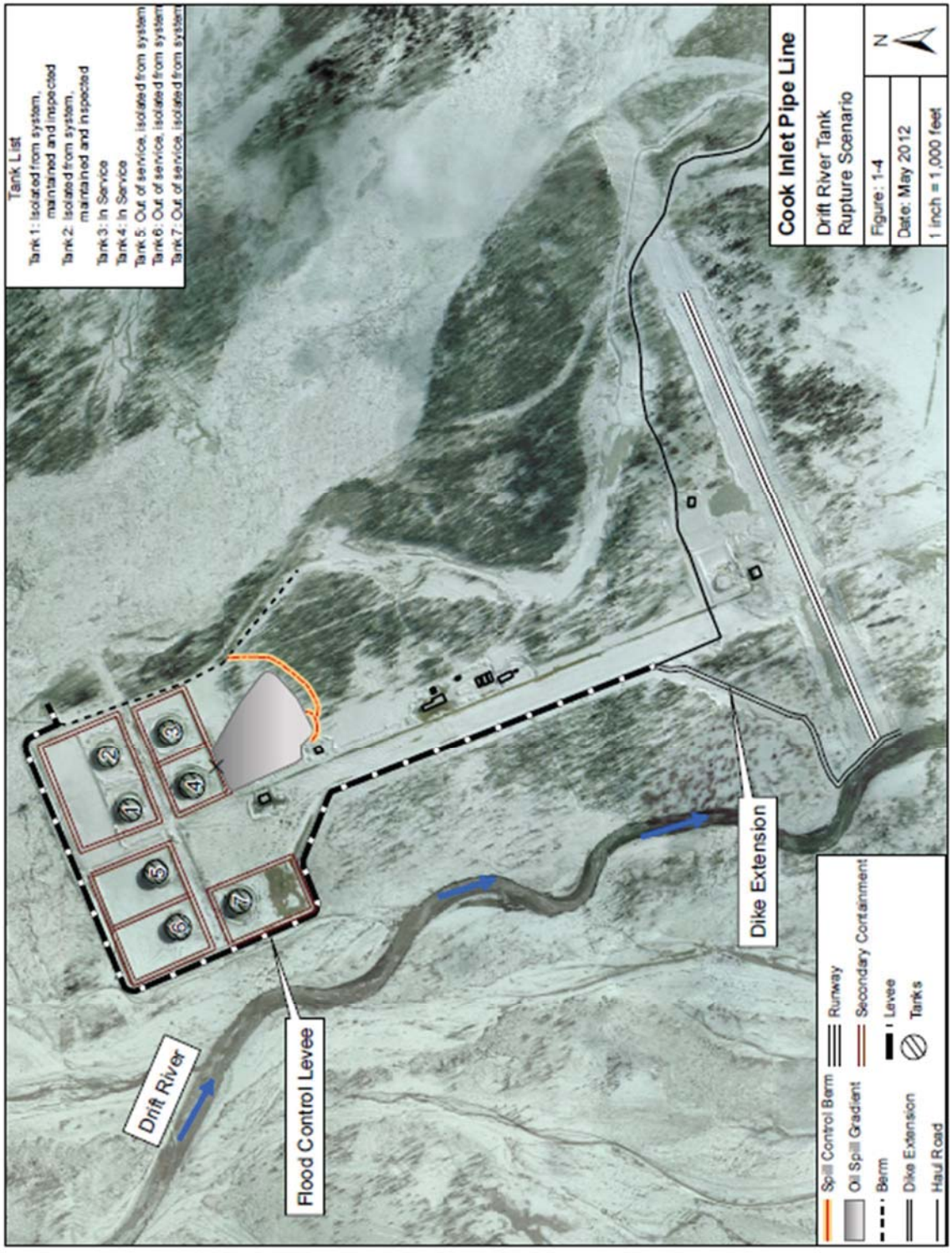
TABLE 1-9: MAJOR OIL EQUIPMENT EQUIVALENTS

RECOVERY TACTIC	TOTAL QUANTITY
Task Force 1	Front-end Loader (2) Dozer (2) Hand Tools
Task Force 2	Manta Ray Skimmers (4) Pump (6) Hoses Portable Tanks (6) Snowmachines (5)
Task Force 3	Crucial Disk Skimmer (1) Pumps (2) Hoses 4-wheelers (3)
Task Force 4	Front-end Loader (2) Dozer (2) Dump Truck (2) Hand Tools

TABLE 1-10: STAFFING TO OPERATE OIL RECOVERY EQUIPMENT

LABOR CATEGORY	TACTIC	DAY 1, STAFF PER SHIFT	DAY 1 – 11 LIQUID RECOVERY, STAFF PER SHIFT	AFTER DAY 11 OILED SNOW RECOVERY, STAFF PER SHIFT
Team Lead	--	4	4	4
Equipment Operator	Task Force 1	4	4	--
	Task Force 2	5	5	--
	Task Force 3	2	2	--
	Task Force 4	--	--	6
Response Technician	Task Force 1	4	4	--
	Task Force 2	6	20	--
	Task Force 3	6	6	--
	Task Force 4	--	--	10
Total	**--**	**31**	**45**	**20**

FIGURE 1-4: GENERAL LAYOUT –TANK #3 AND TANK #4 RUPTURE



SCENARIO 2

PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER

TABLE 1-11: SCENARIO CONDITIONS PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER

PARAMETER	PARAMETER CONDITIONS
Spill Location	Pipeline rupture at Middle River crossing
Date	July 20, 9:00 a.m.
Source and Cause of Spill	Pipeline rupture
Quantity of Oil Spilled	Spill volume is 16,377 bbl, of which almost all reaches open water.
Oil Type	Crude Oil
Weather and Visibility	Clear, 60°F
Wind Direction and Speed	Wind variable
Spill Trajectory	For the purposes of this scenario, an instantaneous erosion event suddenly exposes the pipeline at the bank of a river crossing. The pipeline ruptures catastrophically. Crude oil is discharged from the eastern bank of the Middle River onto the shoreline and into the river. Middle River has a moderate (<1 knot) current. The pipeline crossing is approximately 2.5 river miles north of the tidal flats. Depending on the tide, the river channel extends 1 to 2 miles before emptying into Cook Inlet. For the purposes of this scenario, the released oil reaches Cook Inlet in 3.5 hours. For the purposes of this scenario, most of the released oil is recovered in Cook Inlet.

TABLE 1-12: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(i) Stopping Discharge at Source	Upon detection of the spill, the pipeline is immediately shut down from Granite Point Tank Farm to DRT. The pumping units are isolated and the valves closed.	Not Applicable
(ii) Preventing or Controlling Fire Hazards	The SOSC/FOSC, with the assistance of the Site Safety Officer, verifies that no sources of ignition are introduced to the area. The IRT is on the scene with equipment and personnel to suppress the threat of a fire or explosion. The Site Safety Officer and SOSC/FOSC perform a visual inspection and complete a site safety assessment. The IRT uses intrinsically safe hand-held radios. After declaring the area clear, the Safety Officer prepares a site safety plan including PPE requirements. Access to the spill site is carefully controlled. Monitoring protocol is established by the site Safety Officer for all work areas to ensure personnel protection.	CI-S-1 through S-6

TABLE 1-12: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(iii) Surveillance and Tracking of Oil; Forecasting Shoreline Contact Points	CISPRI uses a combination of visual observations, computer modeling, and remote sensing techniques to produce data on the actual location and the projected direction of the released oil. Tactics associated with tracking and surveillance include the following: • An aircraft is dispatched to monitor for oil in the surrounding area. The aircraft uses visual tracking methods, infrared sensors, digital photography, and/or global positioning system (GPS) equipment. • Vessels deploy satellite-based tracking buoys or strobe markers. • Once the rupture is controlled, the shoreline is delineated using stakes and GPS units. • Responders use field observations (e.g., color of the sheen and plume extents) to estimate the spill volume to water. • Infrared sensors are currently carried on the motor vessel (M/V) *Perseverance* and M/V *Champion*.	CI-TS-1 CI-TS-2 CI-TS-3 CI-TS-4 CI-OW-1
(iv) Protection of Environmentally Sensitive Areas and Areas of Public Concern	Middle River is located within the Trading Bay State Game Refuge and is an anadromous stream. Other areas of concern and potential mitigation measures are identified in the Cook Inlet Subarea Plan (Central Cook Inlet Region) and the Middle River GRS. The area is monitored starting on Day 2 to ensure birds and mammals do not enter the spill area. Bird capture and rehabilitation personnel from the IBR are notified and put on standby for potential activation. Additional information is provided in Section 3.10. Protection of cultural resources will be identified and managed by ADNR. Containment and recovery task forces are mobilized immediately.	CI-SA-1 CI-SA-2 CI-SA-3
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures**	All recovery operations are conducted by CISPRI in coordination with the UC. A staging area and command post are set up at the DRT. Upon notification, M/V *Perseverance* departs from Nikiski Bay towards Middle River. The M/V *Champion* and M/V *Resolution* (owned by Ocean Marine Services, Inc. [OMSI]) begin transiting to OSK dock. At Hour 3, the M/V *Champion* and M/V *Resolution* arrive at OSK dock and crews begin loading the vessels with response gear. The M/V *Champion* is paired with the *Responder* barge. The *Resolution* is prepared to temporarily store recovered fluids onboard. At Hour 4, a contract vessel (CV) tug arrives at OSK dock and is paired with Barge 141. **Task Force 1: M/V *Perseverance*** By Hour 4, the M/V *Perseverance* begins recovery operations using a Crucial 56-30 skimmer and an outrigger boom. The vessel also carries a Foxtail rope mop skimmer. Class 3 workboats are used to tow containment boom in a gated "U" configuration ahead of the M/V *Perseverance,* which recovers and stores recovered oil/water onboard.	CI-OW-1

TABLE 1-12: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures** ***(Continued)***	**Task Force 2: M/V *Resolution* (OMSI)** At Hour 10, the *Resolution* begins recovery operations using a Foxtail rope mop skimmer. The vessel stores recovered fluids in a 249-bbl mini-barge. Two Class 3 workboats are used to tow containment boom in a gated "U" configuration. **Task Force 3: M/V *Champion*/*Responder* Barge** (At Hour 11, the M/V *Champion* and *Responder* barge begin recovery operations using the Crucial 56-30 skimming system. Two Class 3 workboats are used to tow containment boom in a gated "U" configuration. **Task Force 4: CV Tug/Barge 141** At Hour 12, a CV tug and the *Responder* barge enter the recovery area. The purpose of this task force is to transfer recovered oil/water emulsion from other task forces. **Task Force 5: Nearshore Response – M/V *Moriah*** By Hour 12, a Nearshore Task Force is established consisting of the *Moriah*, which can operate in water depths of 6 ft or greater. The *Moriah's* responsibility is to recover floating oil in those areas where deep water draft vessels cannot safely operate (approximately 5 fathoms). The *Moriah* recovers oil with a vertical adhesion band 4 rope mop skimmer. Recovered fluids are temporarily stored in a 100 bbl barge. At Hour 19, Task Force 1 (TF-1) (M/V *Perseverance*) reaches its storage capacity (approximately 1,500 bbl) and stops recovery. They transit to Task Force 4 (TF-4) to lighter. At Hour 24, the total recovery capacity of the response fleet is 5,009 bbl. At Hour 48, the total recovery capacity of the response fleet is 12,111 bbl. This assumes that the M/V *Perseverance* recovers 16.5 hours a day and the *Moriah* recovers 10 hours a day. The rest of their operations include lightering and transiting. By the end of Day 3, the recovery capacity of the spill response fleet has exceeded the amount released from the pipeline. The M/V *Perseverance, Resolution*, and *Moriah* have lightered their inventory to the larger barges.	CI-OW-1 CI-OW-1 CI-OW-4 CI-NS-6
(vii) Lightering Procedures	Barge 141 and the *Responder* barge have a combined oil storage capacity to respond to the pipeline rupture. These barges do not offload while recovery operations are occurring. The M/V *Perseverance*, *Resolution*, and *Moriah* lighter to Barge 141.	CI-OW-4
(viii) Transfer and Storage of Recovered Oil/ Water; Volume Estimating Procedure	Barge 141 and the *Responder* barge have a combined oil storage capacity to respond to the pipeline rupture. These barges do not offload while recovery operations are occurring. The M/V *Perseverance*, *Resolution*, and *Moriah* lighter to Barge 141.	CI-OW-4

TABLE 1-12: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(ix) Plans, Procedures, and Locations for Temporary Storage and Disposal	Barges, such as the Barge 141, and the CISPRI *Responder* can be used for temporary storage before the liquids are loaded onto a tanker-of-opportunity or to a Cook Inlet facility for final disposal. Sewage and gray water produced in a response operation will be transported to a local municipal wastewater treatment facility. Transport of non-oily liquids will be by designated barges or other vessels with suitable storage and handling capabilities.	CI-WM-2
(x) Wildlife Protection Plan	Resources at risk are primarily birds. The wildlife protection strategy is implemented. A wildlife hazing team deployed on Day 1 continues through the cleanup activities. In consultation with IBR, a capture team monitors the spill area on foot and captures oiled animals from Day 1 through the cleanup period. In the event a wildlife recovery and rehabilitation program becomes necessary, responders will refer to the ARRT Wildlife Protection Guidelines for implementation.	CI-W-1
(xi) Shoreline Cleanup Plan	**Task Force 6: Shoreline Response** By Hour 12, the rupture is controlled and recovery crews comprised of HAK and CISPRI responders begin shoreline delineation. The SCAT teams use standardized procedures and terminology to document shoreline oiling and other factors that may place constraints on cleanup operations. Due to the remote location of the pipeline rupture point, UC decides to refrain from bringing in heavy equipment. Oil is removed by manual methods (i.e., sorbents, snare boom, and hand tools). In the immediate area of the rupture, crews cut vegetation to remove oiled plants to prevent remobilization of the oil and contact by wildlife or to accelerate the recovery of the plants. Crews use knives, powered weed cutters, and/or rakes.	CI-SL-1

TABLE 1-13: PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER OIL RECOVERY AND HANDLING CAPABILITY

A	B	C	D	E	F	G	H
VESSEL	**SKIMMERS PER VESSEL**	**RECOVERY SYSTEM**	**EFFECTIVE RECOVERY CAPACITY PER SKIMMER**	**OPERATING TIME**	**EFFECTIVE DAILY RECOVERY CAPACITY**	**STORAGE CAPACITY**	**COMMENTS**
		UNITS:	**[BBL/HR]**	**[HR/DAY]**	**[BBL/DAY]**	**(BBL)**	
		FORMULA:			**B X D X E**		
TF-1: *Perseverance*	1	Crucial 56-30 skimming system, de-rated to 20% of the nameplate pump rate (20% x 707 = 141)	141	16.5	2,327	1,585	Recovers an average of 16.5 hours a day. (Shifts: 11 hours skimming and 5 hours non-skimming.)
TF-2: *Resolution* (OMSI)	1	8 Rope Foxtail Rope Mop skimmer, de-rated to 20% of the nameplate pump rate (20% x 530 = 100)	100	10	1,000	249	Lighters every 2 hours. Recovers 10 hours a day.
TF-3: *Champion*/ *Responder* Barge	1	Crucial 56-30 skimming system, de-rated to 20% of the nameplate pump rate (20% x 707 = 141)	141	24	3,384	12,405	Does not need to lighter during the response.
TF-4: CV Tug/ Barge 141	1	Lightering Vessel	-	24	-	59,421	Does not need to lighter during the response.
TF-5: *Moriah*	1	Vertical adhesion band 4 rope mop skimmer	20	10	200	100	Lighters every 5 hours. Recovers 10 hours a day.
				Total bbl of recovered liquids per day:	**6,911**		

Note:

Nameplate oil recovery rate for the crucial 56-30 skimmers is de-rated from observed recovery values, which were validated through ASTM F2709 testing (March, 2009 SL Ross Report).

TABLE 1-14: MAJOR OIL EQUIPMENT EQUIVALENTS

TASK FORCE (RECOVERY TACTIC)	TOTAL QUANTITY
TF-1: Offshore Recovery (CI-OW-1)	M/V *Perseverance* Foxtail rope skimmer (1) Crucial 56-30 skimmer (1)
TF-2: Offshore Recovery (CI-OW-1)	M/V *Resolution* (OMSI) Foxtail rope skimmer (1)
TF-3: Offshore Recovery (CI-OW-1)	M/V *Champion* *Responder* barge Crucial 56-30 skimmer (1) Foxtail rope skimmer (1)
TF-4: Lightering (CI-OW-4)	CV Tug Barge 141
TF-5: Nearshore Recovery (CI-NS-6)	Utility Vessel *Moriah* Vertical adhesion band 4 rope mop skimmer (1) 100-bbl barge
TF-6: Shoreline Recovery (CI-SL-3 and -6)	Landing craft ATVs Sorbents Snare boom Anchors Hand-tools: knives, powered weed cutters, and/or rakes.

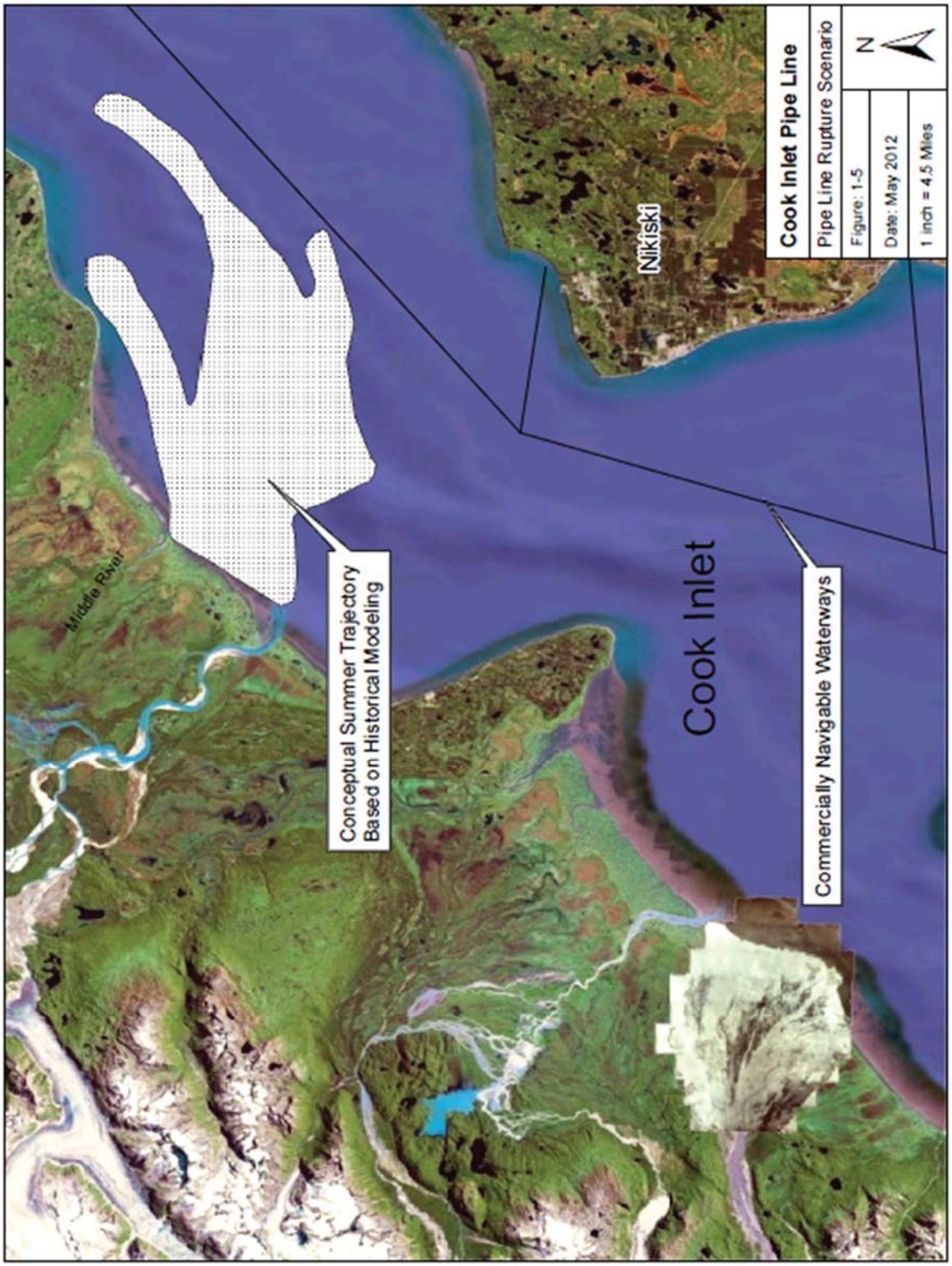
TABLE 1-15: STAFFING TO OPERATE OIL RECOVERY EQUIPMENT

TASK FORCE AND TACTIC	DESCRIPTION	DAY 1, STAFF PER SHIFT	DAY 2, STAFF PER SHIFT	AFTER DAY 2, STAFF PER SHIFT
TF-1: Offshore Recovery (CI-OW-1)	M/V *Perseverance* (6+2) Workboats (2 per boat)	12	12	12
TF-2: Offshore Recovery (CI-OW-1)	M/V *Resolution* (5+2) Workboats (2 per boat)	11	11	11
TF-3: Offshore Recovery (CI-OW-1)	M/V *Champion* (5+2) *Responder* Barge (2) Workboats (2 per boat)	11	11	11
TF-4: Lightering (CI-OW-4)	CV Tug (4) Barge 141 (2)	6	6	6
TF-5: Nearshore Recovery (CI-NS-6)	Utility Vessel *Moriah* (3)	3	3	3
TF-6: Shoreline Recovery (CI-SL-3 and -6)	Landing Craft ATV Operators Responders	--	15	15
Total	**--**	**43**	**58**	**58**

Note:

Vessel staffing includes crew + responders.

FIGURE 1-5: PIPE LINE RUPTURE SCENARIO



SCENARIO 3

PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER

TABLE 1-16: SCENARIO CONDITIONS PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER

PARAMETER	PARAMETER CONDITIONS
Spill Location	Pipeline rupture at Middle River crossing
Date	January 20, 11:00 a.m.
Source and Cause of Spill	Pipeline crack at river crossing
Quantity of Oil Spilled	Spill volume is 16,377 bbl
Oil Type	Crude Oil
Weather and Visibility	Visibility is 0.5 mile with ceiling height of 500 ft, 0°F, snow drifts 2 to 3 ft, light to moderate ice visible on river.
Wind Direction and Speed	Wind from the north at 25 knots.
Spill Trajectory	For the purposes of this scenario, an instantaneous erosion event suddenly exposes the pipeline at the bank of a river crossing. The pipeline ruptures catastrophically. Crude oil is discharged from the eastern bank of the Middle River onto the shoreline and into the river.

TABLE 1-17: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(i) Stopping Discharge at Source	Upon detection of the spill, the pipeline is immediately shut down from Granite Point Tank Farm to DRT. The pumping units are isolated and the valves closed.	Not Applicable
(ii) Preventing or Controlling Fire Hazards	The SOSC/FOSC, with the assistance of the Site Safety Officer, verifies that no sources of ignition are introduced to the area. The IRT is on the scene with equipment and personnel to suppress the threat of a fire or explosion. The Site Safety Officer and SOSC/FOSC perform a visual inspection and complete a site safety assessment. The IRT uses intrinsically safe hand-held radios. After declaring the area clear, the Site Safety Officer prepares a site safety plan including PPE requirements. Access to the spill site is carefully controlled. Monitoring protocol is established by the Site Safety Officer for all work areas to ensure personnel protection.	CI-S-1 through S-6

TABLE 1-17: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(iii) Surveillance and Tracking of Oil; Forecasting Shoreline Contact Points	CISPRI uses a combination of visual observations, computer modeling, and remote-sensing techniques to produce data on the actual location and the projected direction of the released oil. Tactics associated with tracking and surveillance include the following: • An aircraft is dispatched to monitor for oil in the surrounding area. The aircraft uses visual tracking methods, infrared sensors, digital photography, and/or GPS equipment. • Vessels deploy satellite-based tracking buoys or strobe markers. • Once the rupture is controlled, the shoreline is delineated using stakes and GPS units. • Responders use field observations (e.g., color of the sheen and plume extents) to estimate the spill volume to water. • Infrared sensors are currently carried on the M/V *Perseverance* and M/V *Champion*. • If night-time detection is an issue, the use of forward-looking infra-red (FLIR) systems can be considered. These systems could be made available through the USCG if necessary. • In rivers and streams, tracking may also be accomplished using holes augered through the ice.	CI-TS-1 CI-TS-2 CI-TS-3 CI-TS-4 CI-OW-1
(iv) Protection of Environmentally Sensitive Areas and Areas of Public Concern	Middle River is located within the Trading Bay State Game Refuge and is an anadromous stream. Other areas of concern and potential mitigation measures are identified in the Cook Inlet Subarea Plan (Central Cook Inlet Region) and the Middle River GRS. The area is monitored starting on Day 2 to ensure birds and mammals do not enter the spill area. Birds are not as prevalent in the winter, but bird capture and rehabilitation personnel from the IBR are notified and put on standby for potential activation. Additional information is provided in Section 3.10. Protection of cultural resources will be identified and managed by ADNR. Containment and recovery task forces are mobilized immediately.	CI-SA-1 CI-SA-2 CI-SA-3
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures**	All recovery operations are conducted by CISPRI in coordination with the UC. A staging area and command post are set up at the DRT. Upon notification, M/V *Perseverance* departs from Nikiski Bay towards Middle River. The M/V *Champion* and *Resolution* begin transiting to OSK dock. The marine response as described in the summer conditions (Tactic CI-OW-1) can be used in ice conditions of 3/10 to 5/10. Once ice conditions preclude open water tactics, Tactic CI-OW-2 is employed. This scenario assumes that ice conditions preclude the use of workboats towing boom. At Hour 3, the M/V *Champion* and *Resolution* arrive at OSK dock and crews begin loading the vessels with response gear. The M/V *Champion* is paired with the *Responder* barge. The *Resolution* is prepared to temporarily store recovered fluids onboard. At Hour 4, a CV tug arrives at OSK dock and is paired with Barge 141.	CI-OW-2

TABLE 1-17: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures** ***(Continued)***	**Task Force 1: M/V *Perseverance*** By Hour 4, the M/V *Perseverance* begins recovery operations using a Crucial 56-30 skimmer and an outrigger boom. The vessel also carries a Foxtail rope mop skimmer. Recovered oil/water is stored onboard. **Task Force 2: M/V *Resolution* (OMSI)** At Hour 10, the *Resolution* begins recovery operations using a Foxtail rope mop skimmer. The vessel stores recovered fluids in a 249-bbl mini-barge. **Task Force 3: M/V *Champion*/*Responder* Barge** At Hour 11, the M/V *Champion* and *Responder* barge begin recovery operations using the Crucial 56-30 skimming system and an outrigger boom. If ice precludes this setup, crews deploy a Foxtail rope mop skimmer. **Task Force 4: CV Tug/Barge 141** At Hour 12, a CV tug and the *Responder* barge enter the recovery area. The purpose of this task force is to transfer recovered oil/water emulsion from other task forces. At Hour 19, TF-1 (M/V *Perseverance*) reaches its storage capacity (approximately 1,500 bbl) and stops recovery. They transit to TF-4 to lighter. At Hour 24, the total recovery capacity of the response fleet is 4,889 bbl. At Hour 48, the total recovery capacity of the response fleet is 11,811 bbl. This assumes that the M/V *Perseverance* recovers 16.5 hours a day. The rest of their operations include lightering and transiting. By the end of Day 3, the recovery capacity of the spill response fleet has exceeded the amount released from the pipeline. The M/V *Perseverance* and *Resolution* have lightered their inventory to the larger barges.	CI-OW-2 CI-OW-2 CI-OW-2 CI-OW-4 CI-OW-4
(vii) Lightering Procedures	Barge 141 and the *Responder* barge have a combined oil storage capacity to respond to the pipeline rupture. These barges do not offload while recovery operations are occurring. The M/V *Perseverance* and *Resolution* lighter to Barge 141.	CI-OW-4
(viii) Transfer and Storage of Recovered Oil/ Water; Volume Estimating Procedure	Barge 141 and the *Responder* barge have a combined oil storage capacity to respond to the pipeline rupture. These barges do not offload while recovery operations are occurring. The M/V *Perseverance* and *Resolution* lighter to Barge 141.	CI-OW-4

TABLE 1-17: RESPONSE STRATEGY PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(ix) Plans, Procedures, and Locations for Temporary Storage and Disposal	Barges such as the Barge 141 and the CISPRI *Responder* can be used for temporary storage before the liquids are loaded onto a tanker-of-opportunity or to a Cook Inlet facility for final disposal. Sewage and gray water produced in a response operation will be transported to a local municipal wastewater treatment facility. Transport of non-oily liquids will be by designated barges or other vessels with suitable storage and handling capabilities.	CI-WM-2
(x) Wildlife Protection Plan	The wildlife protection strategy is implemented. The area is monitored starting on Day 2 to ensure birds and mammals do not enter the spill area. Birds are not as prevalent in the winter, but bird capture and rehabilitation personnel from the IBR are notified and put on standby for potential activation. In the event a wildlife recovery and rehabilitation program becomes necessary, responders will refer to the ARRT Wildlife Protection Guidelines for implementation. Protection of cultural resources will be identified and managed by ADNR.	CI-W-1 through CI-W-4
(xi) Shoreline Cleanup Plan	**Task Force 5: Shoreline Response** By Hour 12, the rupture is controlled and recovery crews comprised of HAK and CISPRI responders begin shoreline delineation. The SCAT teams use standardized procedures and terminology to document shoreline oiling and other factors that may place constraints on cleanup operations. Two helicopter-deployed teams conduct initial containment activities, travelling downstream and deploying exclusion boom on the ice.	

TABLE 1-18: PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER OIL RECOVERY AND HANDLING CAPABILITY

A	B	C	D	E	F	G	H
VESSEL	**SKIMMERS PER VESSEL**	**RECOVERY SYSTEM**	**EFFECTIVE RECOVERY CAPACITY PER SKIMMER**	**OPERATING TIME**	**EFFECTIVE DAILY RECOVERY CAPACITY**	**STORAGE CAPACITY**	**COMMENTS**
		UNITS:	**[BBL/HR]**	**[HR/DAY]**	**[BBL/DAY]**	**(BBL)**	
		FORMULA:			**B X D X E**		
TF-1: *Perseverance*	1	Crucial 56-30 skimming system, de-rated to 20% of the nameplate pump rate (20% x 707 = 141)	141	16.5	2,327	1,585	Recovers an average of 16.5 hours a day. (Shifts: 11 hours skimming and 5 hours non-skimming.)
TF-2: *Resolution* (OMSI)	1	8 Rope Foxtail Rope Mop skimmer, de-rated to 20% of the nameplate pump rate (20% x 530 = 100)	100	10	1,000	249	Lighters every 2 hours. Recovers 10 hours a day.
TF-3: *Champion*/ *Responder* Barge	1	Crucial 56-30 skimming system, de-rated to 20% of the nameplate pump rate (20% x 707 = 141)	141	24	3,384	12,405	Does not need to lighter during the response.
TF-4: CV Tug/ Barge 141	1	Lightering Vessel	-	24	-	59,421	Does not need to lighter during the response.
				Total bbl of recovered liquids per day:	**6,711**		

Note:

Nameplate oil recovery rate for the Crucial 56-30 skimmers is de-rated from observed recovery values, which were validated through ASTM F2709 testing (March, 2009 SL Ross Report).

TABLE 1-19: MAJOR OIL EQUIPMENT EQUIVALENTS

TASK FORCE (RECOVERY TACTIC)	TOTAL QUANTITY
TF-1: Offshore Recovery (CI-OW-1)	M/V *Perseverance* (OMSI) Foxtail rope skimmer (1) Crucial 56-30 skimmer (1)
TF-2: Offshore Recovery (CI-OW-1)	M/V *Resolution* Foxtail rope skimmer (1)
TF-3: Offshore Recovery (CI-OW-1)	M/V *Champion* *Responder* barge Crucial 56-30 skimmer (1) Foxtail Rope Skimmer (1)
TF-4: Lightering (CI-OW-4)	CV Tug Barge 141
TF-5: Shoreline Recovery (CI-SL-3 and -6)	Helicopter Snowmachines Sorbents Snare boom Anchors

TABLE 1-20: STAFFING TO OPERATE OIL RECOVERY EQUIPMENT

TASK FORCE AND TACTIC	DESCRIPTION	DAY 1, STAFF PER SHIFT	DAY 2, STAFF PER SHIFT	AFTER DAY 2, STAFF PER SHIFT
TF-1: Offshore Recovery (CI-OW-1)	M/V *Perseverance* (6+2)	8	8	8
TF-2: Offshore Recovery (CI-OW-1)	M/V *Resolution* (5+2)	7	7	7
TF-3: Offshore Recovery (CI-OW-1)	M/V *Champion* (5+2) *Responder* Barge (2)	9	9	9
TF-4: Lightering (CI-OW-4)	CV Tug (4) Barge 141 (2)	6	6	6
TF-5: Shoreline Recovery (CI-SL-3 and -6)	Helicopter Pilot Snowmachine Operators Responders	-	15	15
Total	**-**	**30**	**45**	**45**

RESPONSE STRATEGY

FUEL TRANSFER CHRISTY LEE PLATFORM

TABLE 1-21: RESPONSE STRATEGY CONDITIONS FUEL TRANSFER – CHRISTY LEE PLATFORM

PARAMETER	PARAMETER CONDITIONS
Spill Location	Christy Lee Offshore Platform
Date	February 10, 7:00 p.m.
Source and Cause of Spill	Mechanical Failure on Loading Arm
Quantity of Oil Spilled	Spill volume is 520 bbl, of which all reaches open water.
Oil Type	Crude Oil
Weather and Visibility	Overcast, 20°F, 1/10th foot of pan ice present
Wind Direction and Speed	Wind from the northeast at 10 knots
Spill Trajectory	The crude oil is discharged into Cook Inlet. The trajectory of the released oil is estimated as the vector sum of 3% of the wind speed and the surface current. The Cook Inlet surface current is dominated by tidal flow that generates three major rip currents with roughly north-south axes. The tidal rips have speeds of up to 6 knots, and they account for the majority of the volume transport in and out of Cook Inlet. Consequently, under normal wind conditions, the trajectory of released oil would follow tidal currents.

TABLE 1-22: RESPONSE STRATEGY CHRISTY LEE PLATFORM FUEL TRANSFER SPILL

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(i) Stopping Discharge at Source	Emergency shutdown procedures described in the Oil Transfer Manual would be followed.	Not Applicable
(ii) Preventing or Controlling Fire Hazards	The IRT immediately shuts down electrical power and isolates all valves on the platform, and cools equipment if necessary. Throughout the first few hours of the spill, the SOSC/FOSC, with the assistance of the Site Safety Officer, verifies that sources of ignition are shut down or removed from the area. The IRT is on the scene with equipment and personnel to suppress the threat of a fire or explosion. If necessary, support is requested from CISPRI and the M/V *Seabulk Montana* to respond with a 3,000 gallons per minute (gpm) onboard fire system. The Site Safety Officer and SOSC/FOSC perform a visual inspection and complete a site safety assessment. After declaring the area clear, the Site Safety Officer prepares a site safety plan including PPE requirements. Access to the spill site is carefully controlled and secured by Security. Monitoring protocol is established by the Site Safety Officer for all work areas to ensure personnel protection.	CI-S-1 through S-6

TABLE 1-22: RESPONSE STRATEGY CHRISTY LEE PLATFORM FUEL TRANSFER SPILL (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(iii) Surveillance and Tracking of Oil; Forecasting Shoreline Contact Points	CISPRI uses a combination of visual observations, computer modeling, and remote-sensing techniques to produce data on the actual location and the projected direction of the released oil. Tactics associated with tracking and surveillance include the following: • An aircraft is dispatched to monitor for oil in the surrounding area. The aircraft uses visual tracking methods, infrared sensors, digital photography, and/or GPS equipment. • Vessels deploy satellite-based tracking buoys or strobe markers. • Responders use field observations (e.g., color of the sheen and plume extents) to estimate the spill volume to water. • Infrared sensors are currently carried on the M/V *Perseverance* and M/V *Champion*. • If night-time detection is an issue, the use of FLIR systems can be considered. These systems could be made available through the USCG if necessary.	CI-TS-1 CI-TS-2 CI-TS-4 CI-OW-1
(iv) Protection of Environmentally Sensitive Areas and Areas of Public Concern	The Christy Lee Platform is located offshore from the DRT. Areas of concern for central Cook Inlet are identified in Section 3.10 of this plan. Redoubt Bay and Kalgin Island are the areas most likely to be affected by a spill. Protection measures implemented are identified in the Cook Inlet Subarea Plan (Central Cook Inlet Region) and GRS. Protection of cultural resources will be identified and managed by ADNR. As a precaution, exclusion boom would be deployed at mouths of area rivers.	CI-SA-1 CI-SA-2 CI-SA-3 CI-IL-1

TABLE 1-22: RESPONSE STRATEGY CHRISTY LEE PLATFORM FUEL TRANSFER SPILL (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(v) Spill Containment and Control Actions **and** **(vi) Spill Recovery Procedures**	All recovery operations are conducted by CISPRI in coordination with the UC. A staging area and command post are setup at the DRT. Upon notification M/V *Perseverance* departs from Nikiski Bay towards Middle River. The M/V *Champion* and *Resolution* begin transiting to OSK dock. The marine response as described in the summer conditions (Tactic CI-OW-1) can be used in ice conditions up to 3/10 to 5/10. Once ice conditions preclude open water tactics, Tactic CI-OW-2 is employed. This scenario assumes that ice conditions preclude the use of workboats towing boom. At Hour 3, the M/V *Champion* and *Resolution* arrive at OSK dock and crews begin loading the vessels with response gear. The M/V *Champion* is paired with the *Responder* Barge. The *Resolution* is prepared to temporarily store recovered fluids onboard. At Hour 4, a CV tug arrives at OSK dock and is paired with Barge 141. **Task Force 1: M/V *Perseverance*** By Hour 4, the M/V *Perseverance* begins recovery operations using a Crucial 56-30 skimmer and an outrigger boom. The vessel also carries a Foxtail rope mop skimmer. Recovered oil/water is stored onboard. **Task Force 2: M/V *Resolution* (OMSI)** At Hour 10, the *Resolution* begins recovery operations using a Foxtail rope mop skimmer. The vessel stores recovered fluids in a 249-bbl mini-barge. **Task Force 3: M/V *Champion*/*Responder* Barge** At Hour 11, the M/V *Champion* and *Responder* Barge begin recovery operations using the Crucial 56-30 skimming system and an outrigger boom. If ice precludes this setup, crews deploy a Foxtail rope mop skimmer. **Task Force 4: CV Tug/Barge 141** At Hour 12, a CV tug and the *Responder* barge enter the recovery area. The purpose of this task force is to transfer recovered oil/water emulsion from other task forces. At Hour 19, TF-1 (M/V *Perseverance*) reaches its storage capacity (approximately 1,500 bbl) and stops recovery. They transit to TF-4 to lighter. At Hour 24, the total recovery capacity of the response fleet is 4,889 bbl. At Hour 48, the total recovery capacity of the response fleet is 11,811 bbl. This assumes that the M/V *Perseverance* recovers 16.5 hours a day. The rest of their operations include lightering and transiting. By the end of Day 3, the recovery capacity of the spill response fleet has exceeded the amount released from the pipeline. The M/V *Perseverance,* and *Resolution* have lightered their inventory to the larger barges.	CI-OW-2 CI-OW-2 CI-OW-2 CI-OW-2 CI-OW-4 CI-OW-4
(vii) Lightering Procedures	Barge 141 and the *Responder* barge have a combined oil storage capacity to respond to the pipeline rupture. These barges do not offload while recovery operations are occurring. The M/V *Perseverance* and *Resolution* lighter to Barge 141.	CI-OW-4

TABLE 1-22: RESPONSE STRATEGY CHRISTY LEE PLATFORM FUEL TRANSFER SPILL (CONTINUED)

ADEC REQUIREMENT	RESPONSE STRATEGY	CISPRI TECHNICAL MANUAL TACTIC
(viii) Transfer and Storage of Recovered Oil/ Water; Volume Estimating Procedure	Storage of recovered oil/water would be transferred through the Christy Lee Platform to either the onshore storage tanks or the ballast water treatment facility at the DRT. The spill response vessels will off-load through existing equipment or by benefit of readily available equipment pre-located on the platform. Volumes of fluids handled will be monitored either through the use of existing in-line flow meters or through monitoring fluid levels in tanks.	
(ix) Plans, Procedures, and Locations for Temporary Storage and Disposal	Barges such as Barge 141 and the CISPRI *Responder* can be used for temporary storage before the liquids are loaded onto a tanker-of-opportunity or to a Cook Inlet facility for final disposal. Sewage and gray water produced in a response operation will be transported to a local municipal wastewater treatment facility. Transport of non-oily liquids will be by designated barges or other vessels with suitable storage and handling capabilities. Oily and non-oily wastes will be managed and disposed of in accordance with the CISPRI *Technical Manual*.	CI-WM-2
(x) Wildlife Protection Plan	The wildlife protection strategy is implemented. The area is monitored starting on Day 2 to ensure birds and mammals do not enter the spill area. Birds are not as prevalent in the winter, but bird capture and rehabilitation personnel from the IBR are notified and put on standby for potential activation. Depending on the trajectory and ice coverage at this time of year, wildlife personnel will need to be activated for Kalgin Island to assist as appropriate with protective measures for Harbor seals. In the event a wildlife recovery and rehabilitation program becomes necessary, responders will refer to the ARRT Wildlife Protection Guidelines for implementation. Protection of cultural resources will be identified and managed by ADNR.	CI-W-1 through CI-W-4
(xi) Shoreline Cleanup Plan	In the winter, fast ice protects the shoreline from oil in Cook Inlet. Should oil impact the shoreline, cleanup activities will be conducted in accordance with procedures identified in the CISPRI *Technical Manual*. Shoreline cleanup tactics will be coordinated with UC based on the shoreline environment impacted.	CI-SL-1 through SI-SL-8

1.7 NONMECHANICAL RESPONSE OPTIONS [18 AAC 75.425(E)(1)(G)]

1.7.1 In Situ Burning

Nonmechanical response will follow the "In Situ Burning Guidelines for Alaska Revision 1, August 2008." These guidelines provide policy guidance necessary to comply with applicable laws and have received approval for use by the FOSCs. The August 2008 guidelines can be located at: http://www.dec.alaska.gov/spar/perp/docs/ISB-Rev1(Final-August%202008).pdf

Regulatory Approvals

The regulatory mechanism requires approval for the use of burning in the treatment of offshore spills on a case-by-case basis by the Regional Response Team (RRT). The FOSC, who is a member of the USCG and the RRT, will collect the necessary data that will be analyzed by the RRT in making their decision. If human life is in danger, the FOSC has unilateral authority to authorize the use of in situ burning. The contact person for the USCG is:

Captain of the Port - Anchorage
US Coast Guard
510 L Street, Suite 100
Anchorage, AK 99501-1946
(907) 271-6700

The following is the step-by-step process that must be followed in order to use in situ burning:

1. The FOSC and IC will determine if mechanical means of containment and recovery will work. While doing this, they will compile all available information for later use.

2. The FOSC and IC will complete the RRT checklist that is used to determine the feasibility of in situ burning. Some sections of the checklist will require input from various agencies (e.g., Federal Aviation Administration [FAA]).

3. The RRT will review the information to determine whether or not in situ burning may be used.

4. Based partially on the relative location of the spill and the atmospheric conditions (from the FAA), the RRT will make the final determination as to whether in situ burning may be used.

An open burning permit from the State of Alaska is also required under 18 AAC 50.030 in order to burn any type of hydrocarbon product or byproduct. Although this permit can be obtained in a short period of time, it should be requested immediately upon deciding to perform a burn. For an open-water burn, the RRT questionnaire can be submitted to the ADEC for permitting purposes.

If the IC assesses the situation and concludes that in situ burning is a viable option in the treatment of the spill, he/she should inform the FOSC immediately. This will aid in decreasing the delay time that occurs while seeking approval from the RRT. The IC should also place the in situ burning crews and equipment managers on standby.

In Situ Burning Techniques

Refer to CISPRI's *Technical Manual*, Sections CI-NM-3 through 5, for details on burning techniques and specifics on in situ burning techniques. Refer to Section CI-NM for in situ burning forms.

Termination Conditions

In situ burning activities in a given area may be terminated because of conditions such as:

- Adverse weather,
- Darkness – some vessels may only be able to operate with limited light,
- Oil weathered to an unburnable state,
- Oil layer too thin for successful burning,
- Regulatory agency decision to terminate,
- Completion of burning activities, and
- Wind conditions.

Specific guidelines will be set forth by the IC in consultation with the FOSC. Consult CISPRI's *Technical Manual*, Sections CI-NM-3 through 5, for guidelines on termination conditions.

Safety Precautions

In situ burning can be dangerous and should only be performed by qualified personnel. Refer to CISPRI's *Technical Manual* for safety precautions, burning permits, and points of contact before applying for a burning permit. In addition, the Regional Operation Command Center will issue an advisory warning to all pilots in the area if in situ burning is applied.

MSDS should be thoroughly reviewed before the use of any chemical. The information from the MSDS will explain what safety precautions should be used while working with the chemicals.

1.8 FACILITY DIAGRAMS [18 AAC 75.425(E)(1)(H)]

Figures 1-6 through 1-17 illustrate general layouts for the GPTF, crude oil transmission pipeline route, WFPS, DRT, and Christy Lee Platform.

FIGURE NO.	FACILITY NAME
1-6	Cook Inlet Pipeline Major Facilities
1-7	Granite Point Tank Farm Facility Diagram
1-8	West Foreland Pump Station Facility Diagram
1-9	Christy Lee Facility Diagram
1-10	Drift River Terminal Facility Diagram
1-11	Pipe Line Route Overview Diagram
1-12	Pipe Line Route 1
1-13	Pipe Line Route 2
1-14	Pipe Line Route 3
1-15	Pipe Line Route 4
1-16	Pipe Line Route 5
1-17	Pipe Line Route 6

FIGURE 1-5: COOK INLET PIPELINE MAJOR FACILITIES

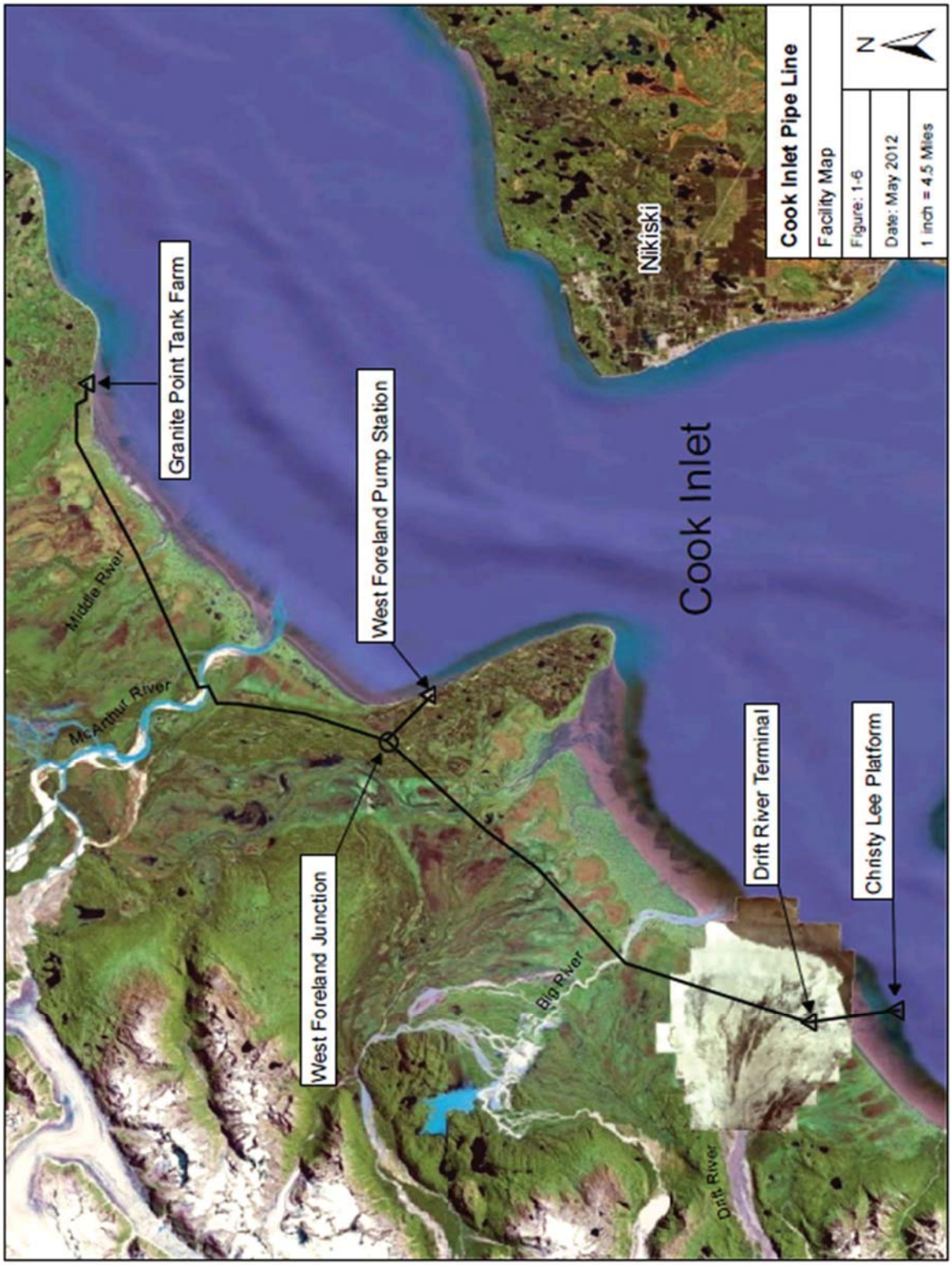


FIGURE 1-6: GRANITE POINT TANK FARM FACILITY DIAGRAM

FIGURE 1-7: WEST FORELAND PUMP STATION FACILITY DIAGRAM

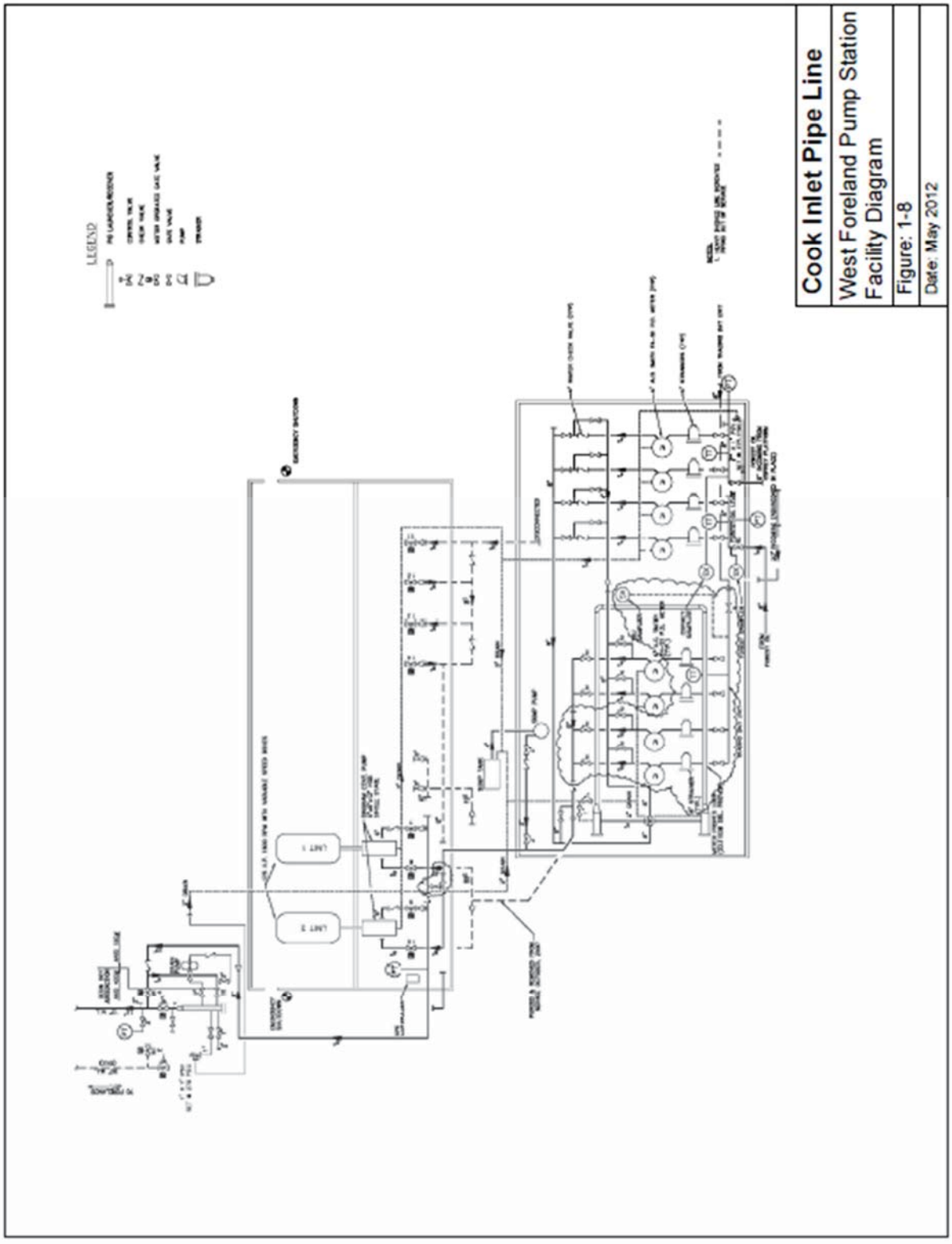


FIGURE 1-8: CHRISTY LEE PLATFORM DIAGRAM

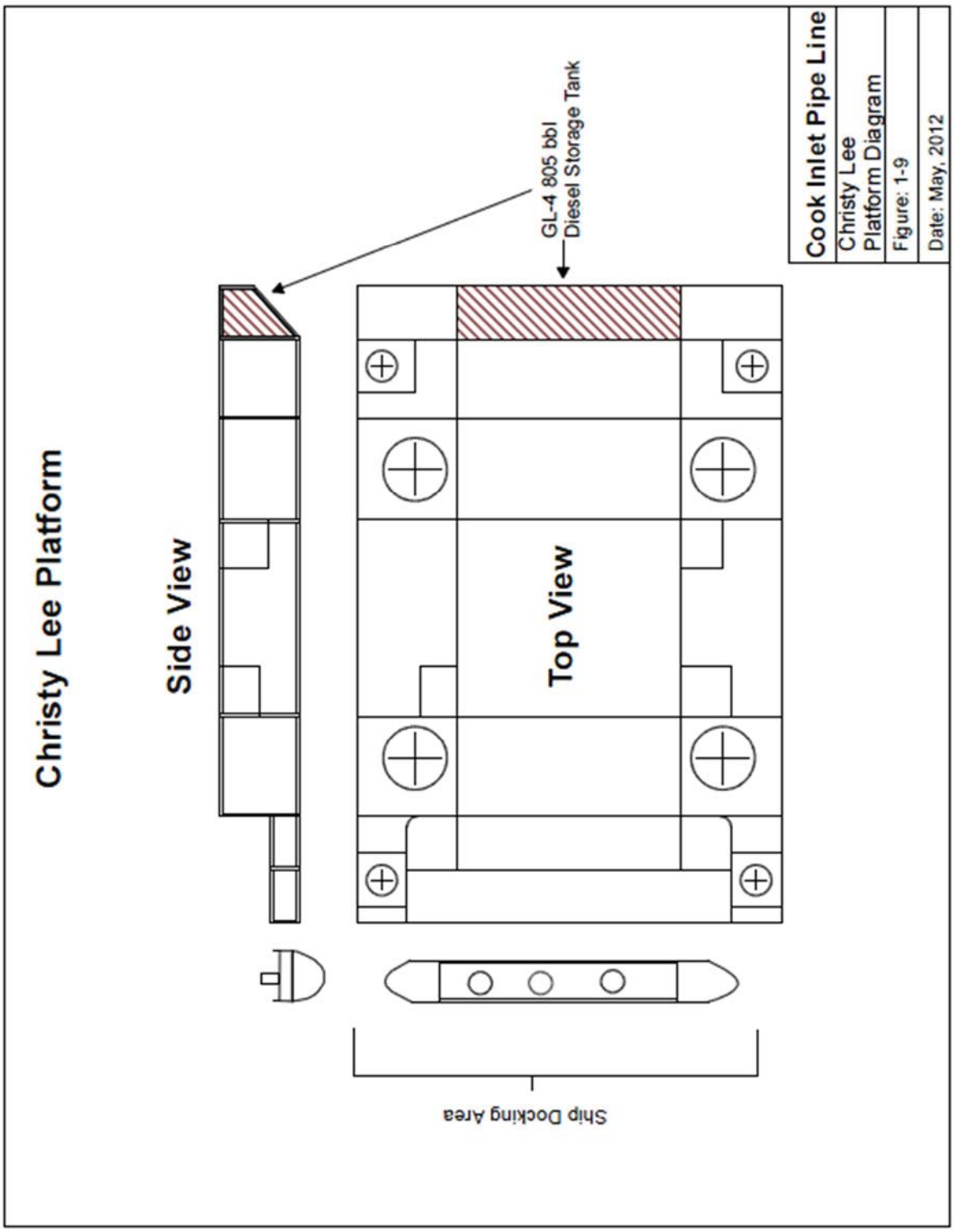


FIGURE 1-9: DRIFT RIVER TERMINAL FACILITY DIAGRAM

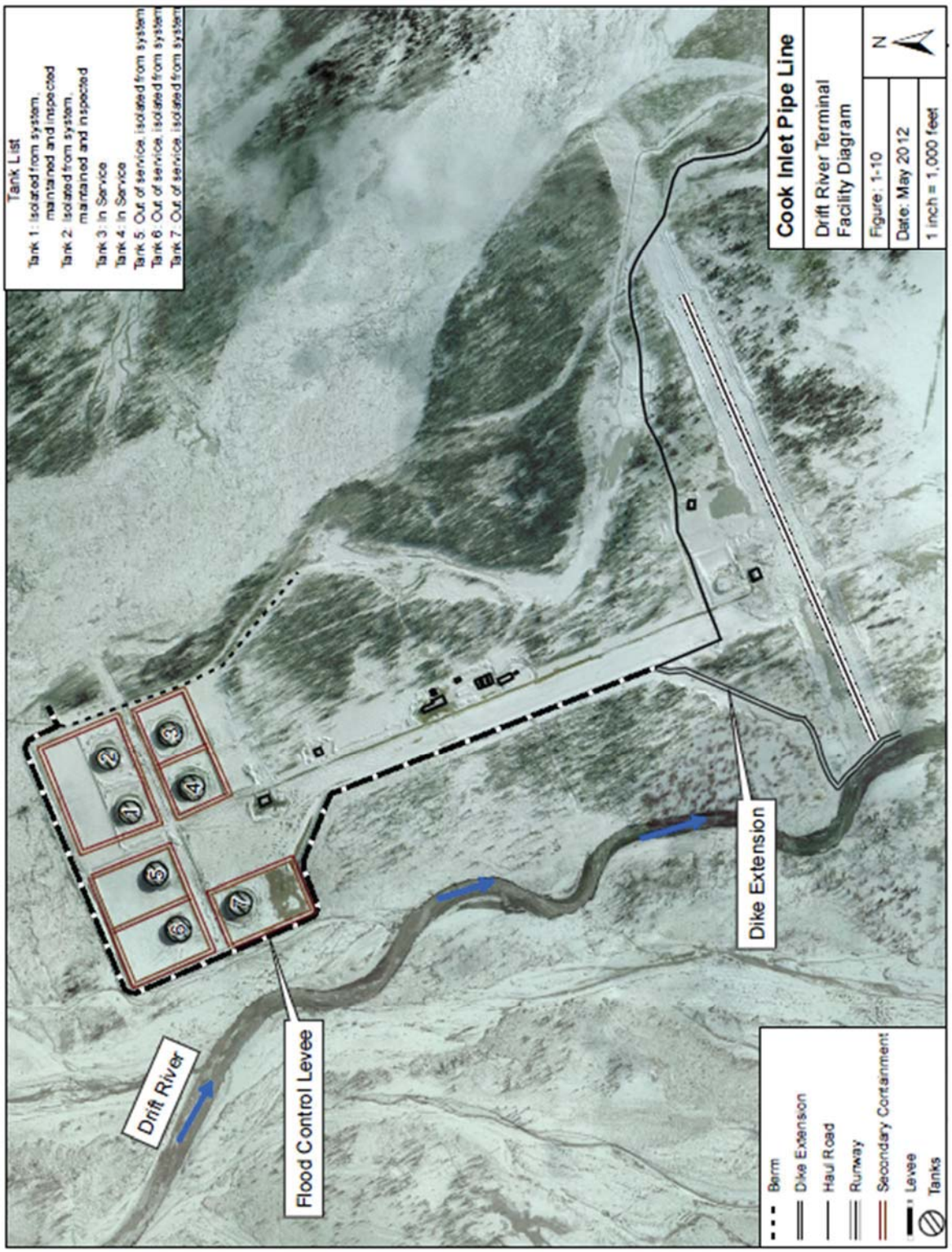


FIGURE 1-10: PIPE LINE ROUTE OVERVIEW DIAGRAM

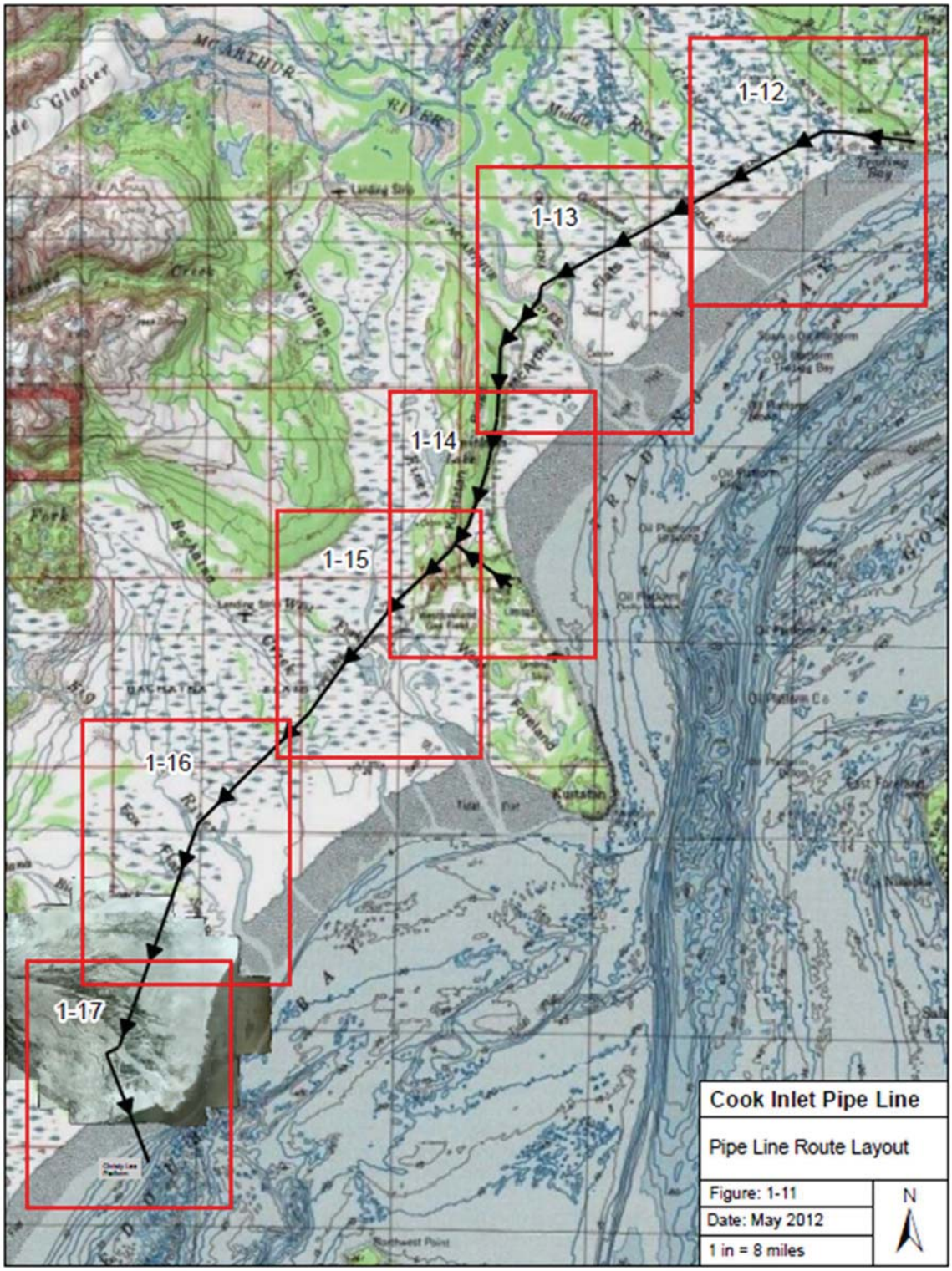


FIGURE 1-11: PIPE LINE ROUTE 1

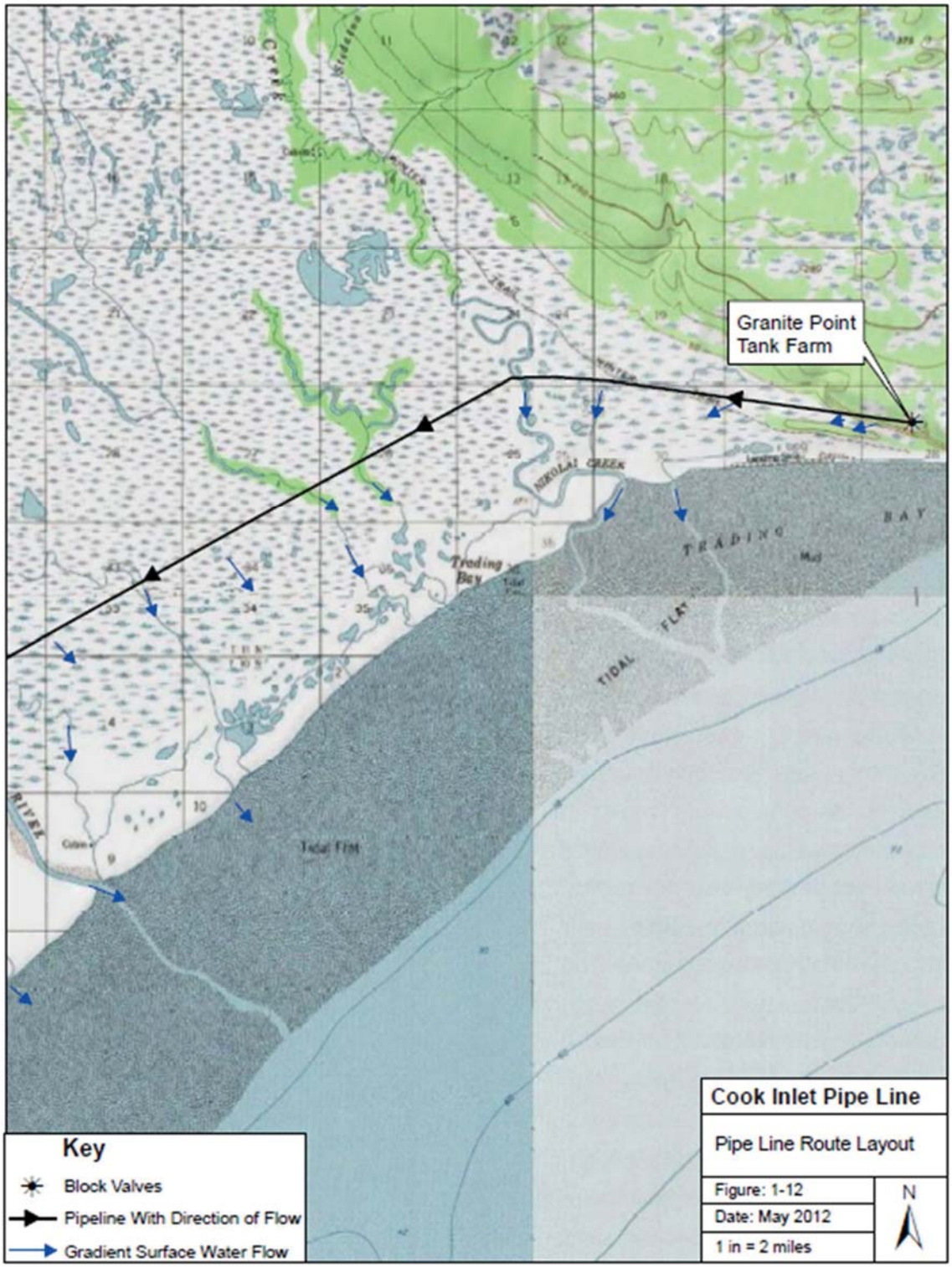


FIGURE 1-12: PIPE LINE ROUTE 2

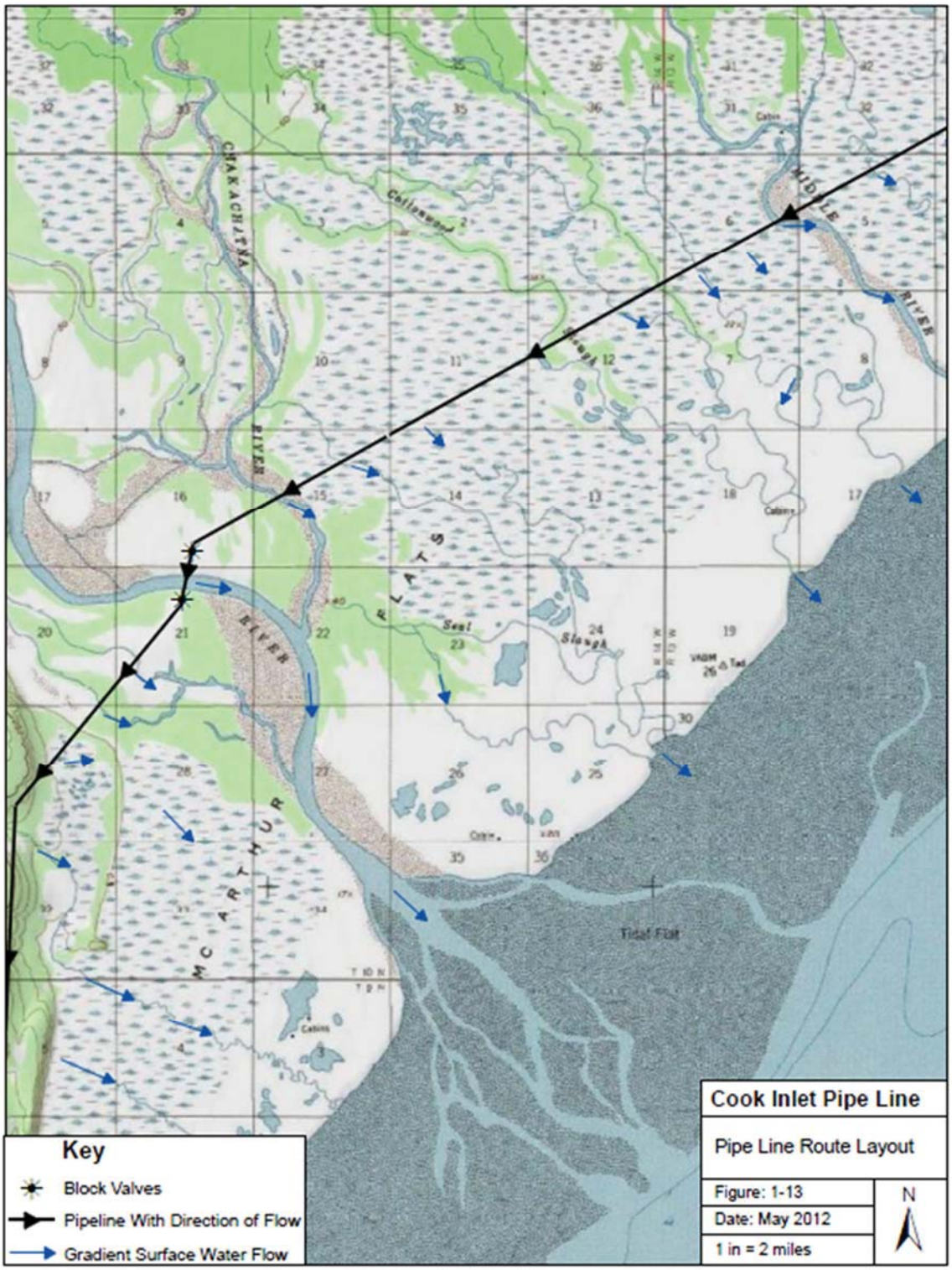


FIGURE 1-13: PIPE LINE ROUTE 3

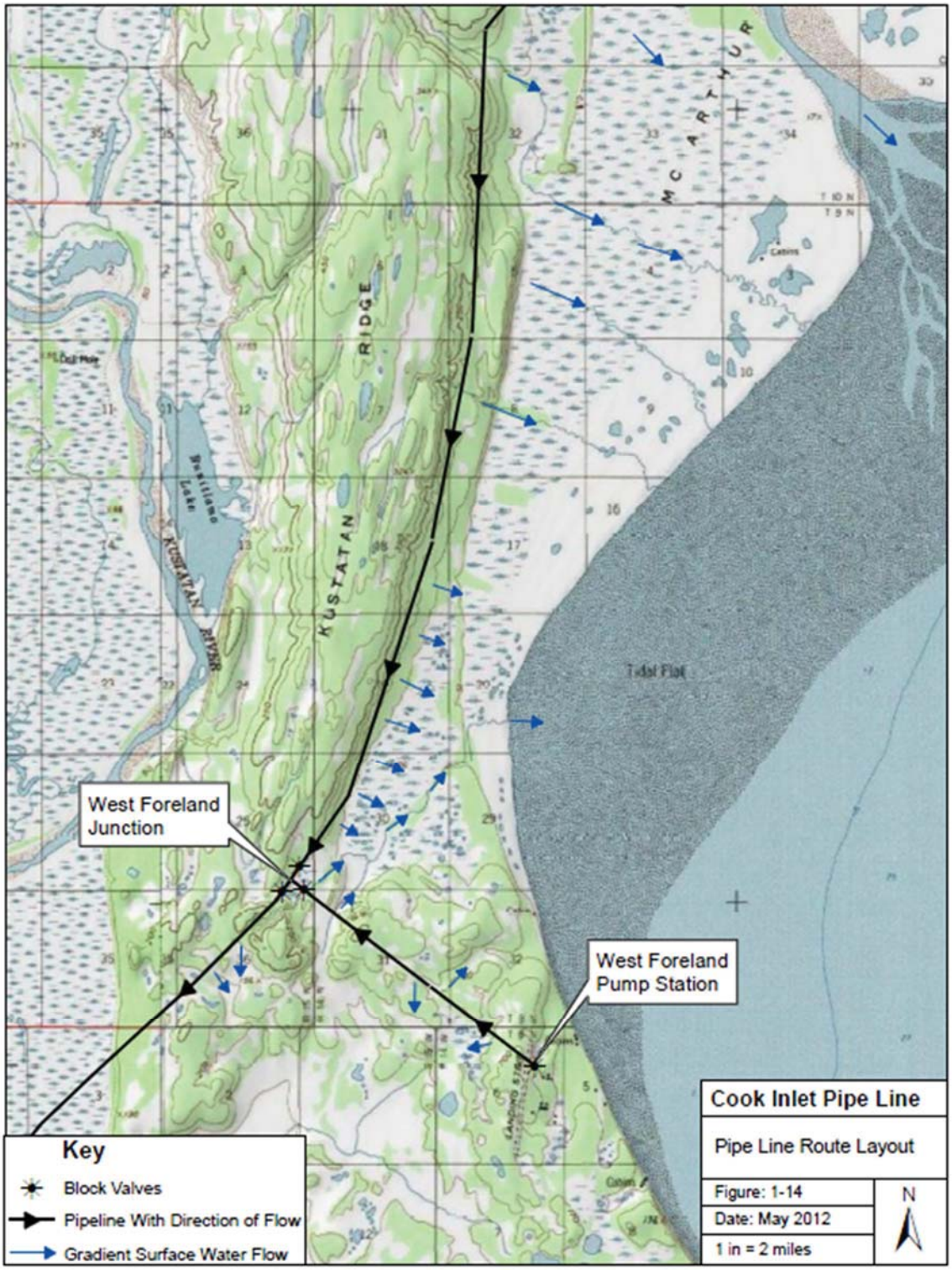


FIGURE 1-14: PIPE LINE ROUTE 4

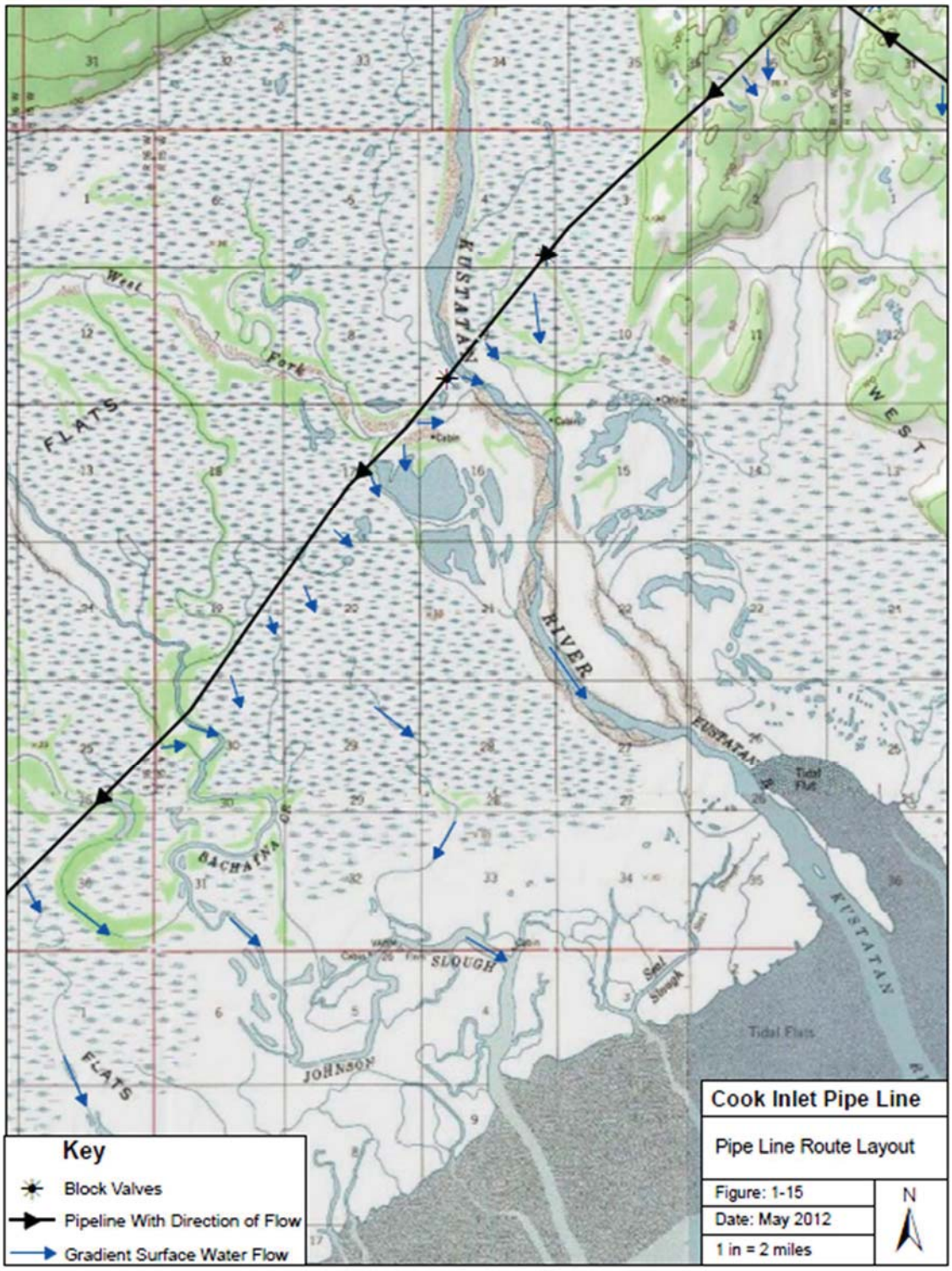


FIGURE 1-15: PIPE LINE ROUTE 5

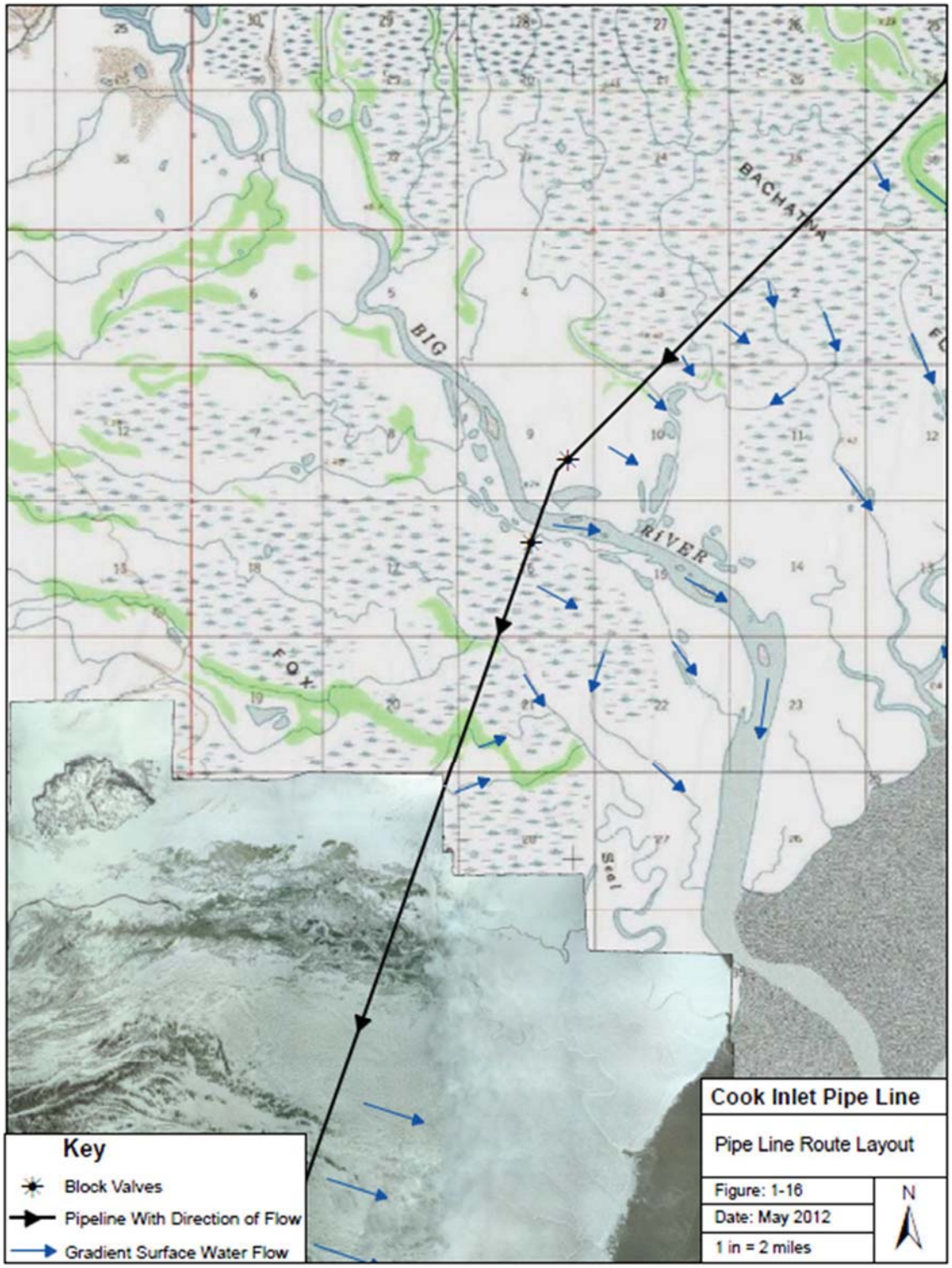
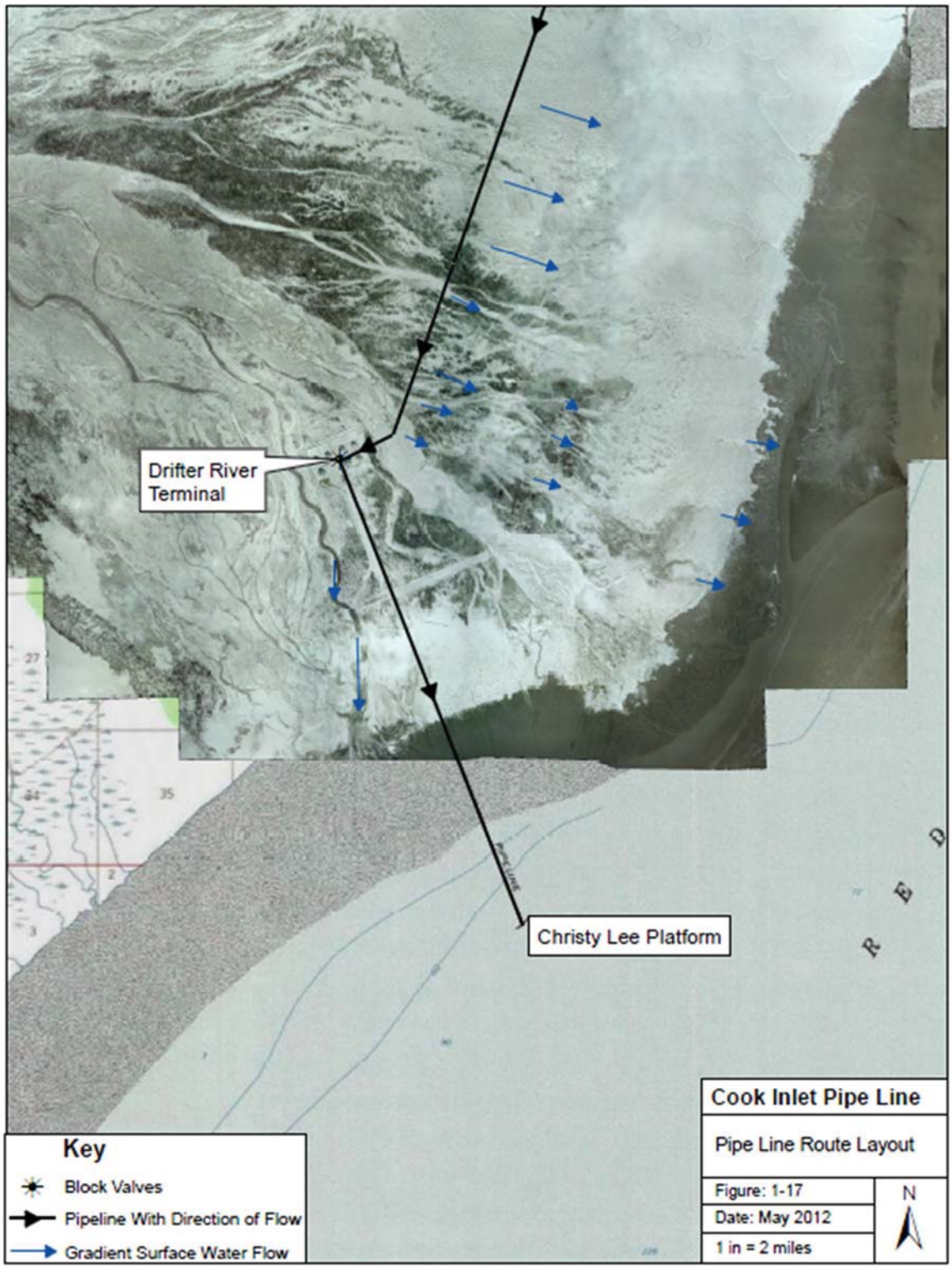


FIGURE 1-16: PIPE LINE ROUTE 6



PART 2. PREVENTION PLAN
[18 AAC 75.425(e)(2)]

2.1 PREVENTION, INSPECTION AND MAINTENANCE PROGRAMS [18 AAC 75.425(e)(2)(A)]

CIPL is dedicated to spill prevention, which is demonstrated by its extensive inspection, monitoring, and surveillance programs along the pipeline and its associated facilities (GPTF, WFPS, DRT, and Christy Lee Platform).

2.1.1 OIL DISCHARGE PREVENTION TRAINING PROGRAMS [18 AAC 75.020]

Personnel involved with oil-handling duties participate in a spill prevention training program. To minimize the potential for spills, personnel are instructed in the operation and maintenance of equipment for which they are responsible. If an employee is working offshore, the spill prevention orientation and training includes review of the Oil Transfer Manual specific for the Christy Lee Platform.

Operational personnel are trained by their supervisor concerning facility-specific preventive measures. All field-based employees and contract personnel responsible for performing oil-handling operations are briefed on facility-specific handling and transfer requirements prior to conducting oil transfers or handling oil. The spill prevention training program includes a listing of training objectives identifying subject, frequency and type required for each job position.

Course components include: hazard communication lock-out/tag-out procedures; noise, eye, and face protection methods; respiratory protection; confined space; fire prevention and suppression; oil spill prevention; helicopter operations; and hazardous materials technical and environmental training (spill reporting prevention training).

Training records are maintained electronically along with required training for each CIPL employee. The system is accessible from the internet, and helps ensure timely completion of modules so that employee competencies remain current. Spill prevention training records will be maintained for 5 years, and training records are retrievable upon ADEC request.

2.1.2 SUBSTANCE ABUSE PROGRAMS [18 AAC 75.007(e)]

CIPL maintains a drug abuse policy and related programs. Per this policy, upon entering the company premises, CIPL employees and contract personnel must be free from the influence of drugs and/or alcohol. The company has jurisdiction to intervene, investigate, and impose disciplinary measures when the drug abuse policy is suspected of being violated. The CIPL drug policy was established to ensure the safety of all employees and contractors, and to prevent spills or other incidents.

New hires, regardless of job responsibilities, are subject to a pre-employment urinalysis drug screen test. Throughout their term of employment, employees and contractors covered under the U.S. Department of Transportation (DOT) regulations and/or in safety-sensitive positions are subject to random drug and alcohol testing. The random testing program follows the requirements of DOT regulations, 49 CFR 199.

Drug and alcohol testing occurs prior to employment and at random based on job responsibilities. CIPL employees are also subject to drug and alcohol testing if there is reasonable suspicion of substance abuse and after reportable incidents to determine if drugs or alcohol were contributing factors, as well as following drug or alcohol rehabilitation.

CIPL employees who test positive for drugs or alcohol will be informed immediately and removed from safety-sensitive work. Management will be advised of the test results. Disciplinary action will follow per company policies. Failure to cooperate in a drug and alcohol search, refusal to take a drug or alcohol test, or testing positive for a second time may result in termination of employment. Contract employees who test positive on a drug or alcohol test will not be allowed to return to work for CIPL.

2.1.3 MEDICAL MONITORING PROGRAM [18 AAC 75.007(e)]

Field employees are enrolled in medical surveillance programs per their potential to be a first responder. CIPL's program includes Hazardous Waste Operations and Emergency Response (HAZWOPER), respiratory protection, and hearing conservation. The frequency interval for most programs is 12 months; however, some programs are set for 24- or 36-month intervals.

Any restrictions preventing an employee from performing a job assignment are communicated to the appropriate supervisors.

2.1.4 SECURITY PROGRAM [18 AAC 75.007(F)]

GPTF and WFPS are remote facilities staffed 24 hours per day. Though accessible by road, there is no through traffic, and the nearest community is approximately 15 miles from GPTF. Prior permission must be obtained to access the facilities. The facilities are lighted for 24-hour operations, which facilitates security monitoring.

The crude oil transmission pipeline is buried, so the risk of vandalism, sabotage, and unauthorized access is low. As described in Section 2.1.6, the pipeline route is patrolled by aerial surveillance weekly.

The DRT is manned 24 hours per day by field operators and only accessible by air. There are no roads or boat docks in the vicinity of the terminal. The airstrip is equipped with a non-directional radar beacon. A large, easily visible sign on the roof of the hangar warns approaching aircraft that this is a private landing field. External lighting at the facility enhances security at night, aids in detection of spills, and prevents vandalism.

The offshore Christy Lee Platform is a stand-alone remote structure and accessible only by helicopter or vessel. Operators make hourly routine operational-related inspections via SCADA and remote cameras during their shift. Prior permission must be obtained for anyone to access the platform. A CIPL expeditor is responsible for keeping a record of individuals that schedule travel to any facility via helicopter. It is the expeditor's responsibility to ensure that individuals have obtained permission from CIPL to visit a facility.

There are several small communities located along the west side of the Cook Inlet. Although vandalism is possible, the risk of sabotage or vandalism to CIPL assets is considered to be negligible due to the location, security program, and increased vessel security during transfer operations. However, if a

discharge does occur as a result of sabotage and/or vandalism, all operations will be terminated, personnel will be immediately notified, and appropriate spill response actions will be implemented.

2.1.5 TRANSFER PROCEDURES [18 AAC 75.025]

TRANSFERS ONSHORE

Fuel transfers are conducted in accordance with CIPL Standard Operating Procedures (SOPs) and are monitored in their entirety by an operator. The following steps are taken by personnel at onshore facilities during fluid transfers to prevent discharges:

- Loading rates are reduced at the beginning and end of the transfer;
- Prior to starting the fluid transfer, the tank and container levels, valves, and vents are checked to prevent overfilling or accidental releases;
- Fuel transfers are conducted only in areas with secondary containment;
- Drip trays or liners are placed under all hose connections or other sources of spillage;
- Line-of-sight is kept with the connections and hoses or other sources of spillage throughout the transfer process;
- After the transfer, care is taken when breaking connections to avoid spillage, and all valves are securely closed; and
- Tank and container levels are checked after transfer for signs of spills.

TRANSFERS AT THE CHRISTY LEE PLATFORM

The DRT has one offshore platform (Christy Lee) for tanker berthing and loading of crude oil. The berth has three Continental Emsco loading arms for connection to a vessel. Only two arms are used at a time for the loading operations. The loading arms are equipped with manually operated cam-style quick disconnect couplings, which attach to the vessel's piping manifold.

The Operations Control Center controls the crude transfer. A Platform Operator monitors the transfer operations from the platform control building using radio communication with the control center and control panels for loading arms, valves, and associated alarms.

Loading rates are reduced at the beginning and the end of a transfer. After receiving approval from the vessel, the Platform Operator notifies the Onshore Operator to begin pumping at a reduced rate until connections are checked for minor leaks and the vessel checks proper tank flow. When nearing completion, the vessel will notify the Platform Operator to slow down the rate for topping off the delivery. The Onshore Operator will make necessary rate adjustments. Upon completion of the loading operation, the loading arms are drained into the platform sump for eventual transfer back to the terminal via the two 30-inch pipelines. In the event of an emergency, the Platform Operator has remote shutdown capabilities of onshore loading pumps.

A CISPRI oil spill response vessel (OSRV) is on site during transfer operations. An oil containment boom is not deployed during transfer operations because the currents at the Christy Lee Platform far exceed the

holding capacity of containment boom. Oil will entrain under the boom at about 1 knot, and the currents in this area almost always exceed that. The only time it would be feasible to deploy boom would be at slack water, and deploying boom into the water for that short time frame (approximately 1 hour) is not realistic.

Specified fuel transfer procedures are outlined in the USCG-approved Offshore Operations Manual for CIPL.

The offshore Christy Lee Platform has an Oil Transfer Manual in place that meets the requirements of 18 AAC 75.025. At a minimum, the following information is included:

- A list of appropriately trained Persons In Charge (PICs) for overseeing each transfer operation;
- A description of how communications are maintained between each person involved in the transfer;
- Secondary containment precautions required for each transfer;
- Precautions to be taken at each connection point;
- Emergency shutdown procedures;
- List of available containment equipment;
- Procedures used during the transfer operation; and
- Checklists and forms.

2.1.6 LEAK DETECTION, MONITORING, AND OPERATING REQUIREMENTS FOR CRUDE OIL TRANSMISSION PIPELINES [18 AAC 75.055]

The crude oil transmission pipelines consist of the following lines:

- 20-inch diameter mainline from GPTF to the DRT, approximately 41.2 miles long.
- 12-inch diameter transmission line from the WFPS at the TBPF, which connects to the 20-inch mainline at milepost 19.8, approximately 2 miles long.

CIPL's transmission piping is utilized for crude oil batch shipments on average 6 to 8 hours per day. During normal operations, crude oil is batched from GPTF and WFPS during daylight hours for storage in the tanks at the DRT. When the line is not transmitting crude oil, there is a mass pack of 80,000 bbl of crude in the line that, along with a 4-inch and 8-inch back pressure controller, maintains the pipe line pressure.

In accordance with 18 AAC 75.055(a)(1), the SCADA system and the operator on duty continuously (24 hours per day) monitors the operation of the crude oil transmission pipeline providing real-time information on pipeline status. The SCADA system is accurate to 1 percent of the pipe throughput and has a high degree of reliability. The system takes into account changes in pressure, oil temperature, oil type, and weather. The operator compares the GPTF and WFPS read out counters that give the amount of product pumped against the receipt meter gauge, measuring the amount of product tanked. Additionally, the operator observes the pipeline pressure during transient and steady state conditions and shuts the pipeline down when an anomaly is noted. In order to verify that the system is operating

correctly, regular checks on equipment and software are conducted in accordance with preventive maintenance procedures. System accuracy is further described in Section 4.6.

Metered volume balancing is performed at least once every 24 hours, as required by 18 AAC 75.055(a)(2). The operator at DRT receives continual meter readings from WFPS and GPTF. These are used with the DRT meter to provide real-time over/short variance monitoring through the control system for both long- and short-term operator defined limits. A variance of ± 1 percent alerts facility personnel of a possible loss of product, and procedures are then taken to ensure that the oil volume in question is accounted for.

In accordance with 18 AAC 75.055(a)(3), the entire length of the pipeline is patrolled by aerial surveillance once a week, except during inclement weather. The goal of these aerial surveys is visual detection of a discharge. Although the pipeline is buried 4 feet deep, the line pressure, relatively high water table in the area, and lower specific gravity of crude oil would result in any lost product surfacing readily.

The DRT control board operator can stop the flow of incoming oil within 1 hour after detection of a spill using the control panel located in the operations center, as required by 18 AAC 75.055(b). If a spill is detected, block valves, remotely operated motor-operated valves (MOVs), and check valves can be closed to isolate a pipeline segment, minimizing the spill volume. Pipeline flow can be completely stopped immediately upon detection of a leak by shutting down pumps through the control panel at the DRT. The crude oil transmission pipeline at DRT is also equipped with a spring-loaded 10-inch pressure relief valve that automatically opens when pressure is more than 125 pounds per square inch (psi), diverting the flow of oil into relief tanks.

Aerial or ground-based surveillance may be requested to verify a spill. Aircraft and helicopters for CIPL's use are available 24 hours per day from Nikiski, Kenai, Anchorage, and Homer.

The crude oil transmission pipeline is also equipped with a leak detection software package provided by Ed Farmer and Associates, Inc. (EFA). This software package uses MassPack Compensated Flow Comparison and Negative Pressure Wave Monitoring, or acoustic monitoring, which detects a wide range of potential leak situations.

2.1.7 FIELD-CONSTRUCTED ABOVEGROUND OIL STORAGE TANK REQUIREMENTS [18 AAC 75.065]

Section 3.1.3 and Table 3-1 provide information on the regulated stationary oil storage tanks with a capacity greater than 10,000 gallons located at the CIPL facilities including GPTF, DRT, and Christy Lee Platform. All ADEC-regulated, field-constructed, aboveground oil storage tanks were placed in service in the 1960s. Shop-fabricated oil storage tanks are not present at the facilities represented in this ODPCP.

INSPECTIONS

Aboveground oil storage tanks with a capacity of 10,000 gallons or greater are externally inspected every 5 years. Internal American Petroleum Institute (API) 653 inspections are conducted approximately every 10 years. Inspections adhere to guidelines of API 653, *Tank Inspection, Repair, Alteration, and*

Reconstruction, Third Edition, December 2001, and Addendum 1, September 2003 or API 12R1, *Recommended Practice for Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service*, 5th Edition, August 1997 as applicable and as required by 18 AAC 75.065(a).

Internal inspection intervals are determined by corrosion rates measured during previous inspections and the calculations for minimum required thickness of tank bottoms. Per 18 AAC 75.065(b)(2), internal inspection intervals are not based on similar service provisions provided in API 653. Inspection intervals are set to ensure that the bottom plate minimum thicknesses at the next inspection are not less than 0.10 inch. However, the internal inspection interval shall not exceed 20 years.

Records of inspections, major repairs, alterations, reconstruction, or change in service are maintained on site for as long as the tank is in service and available to ADEC upon request.

CONSTRUCTION

In accordance with 18 AAC 75.065(h)(1), all onshore ADEC-regulated oil storage tanks associated with this facility were installed prior to May 14, 1992, and are equipped with the following:

- Cathodic protection in accordance with API Standard 651, First Edition, 1991; and
- A thick film liner in accordance with API Standard 652, First Edition, 1991.

Aboveground oil storage tanks are equipped with an impressed current cathodic protection system that is operated and maintained consistent with National Association of Corrosion Engineers (NACE) *Section 11 of Standard Recommended Practice: External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms* (NACE RP0193-2001). Rectifier readings are obtained bi-monthly, and a potential survey is conducted annually by a corrosion expert or qualified cathodic protection tester. The entire tank area, including tanks and piping, is protected from external corrosion by the impressed current cathodic system. The crude oil tanks at the DRT have a thick film internal liner (epoxy coating) to a height of about 5 feet inside the tank to prevent internal corrosion.

As required by 18 AAC 75.065(n), cathodic protection test lead wires on field-constructed aboveground storage tanks are maintained in a condition that enables electrical measurements to determine the effectiveness of the systems.

The ADEC-regulated diesel tank on the Christy Lee Platform is integral to the platform structure.

OVERFILL PREVENTION

In accordance with 18 AAC 75.065(k), overfill protection devices and alarms are installed on tanks. Table 3-1 identifies the overfill detection device for each ADEC-regulated tank.

The tank at GPTF is protected from overflow by a float switch that will cause the battery-operated tank inlet valve to close should the tank liquid level reach a height of 27 feet. This station is also equipped with a high-pressure shutdown device. During high-pressure shutdown conditions, the station will remain shut down until the cause is determined and corrected.

High-high liquid-level alarms are set at 47 feet for Tanks 1, 2, 3 and 4. These crude oil tanks are 48 feet high. The high-level alarms are set at 45 feet for all tanks and are tested prior to tank loading or weekly. An inactive tank alarm is used to monitor any change in the level of idle tanks; it is set to detect a change of 2/16 of an inch in a 5-minute time period. Approval from the CIPL Team Leader must be obtained to fill the tanks higher than 45 feet.

Testing of overfill protection devices is conducted in accordance with 18 AAC 75.065(l) and federal regulations. Testing includes semi-annual testing of automatic alarms and equipment shut-ins by simulating a malfunction or a high liquid-level at the alarm sensor. High-level alarms in storage tanks are currently tested every 30 days by either a simulation of an alarm at the sensor or by other means. Exceptions are made to the 30-day testing rule for the crude oil storage tanks at DRT that are not currently in use; at these tanks, testing would occur prior to transfer.

Results of alarm tests are signed by the appropriate supervisor or inspector, and immediate actions are taken to correct malfunctions and inoperative alarms. Testing and calibration reports are maintained at the facilities.

Overfill prevention for the diesel tank on the Christy Lee Platform consists of surveillance during transfer operations, constant radio contact between the platform and terminal, and visual monitoring from the control tower. The tank is filled approximately once a year.

NOTIFICATIONS AND SERVICE STATUS

In accordance with 18 AAC 75.065(e), CIPL will notify ADEC prior to a field-constructed aboveground tank undergoing a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure. CIPL will also notify ADEC before returning such tanks to service.

As required by 18 AAC 75.065(o), any field-constructed aboveground oil storage tank removed from service for more than 1 year must be free of accumulated oil; marked with the words “Out of Service” and the date taken out of service; secured in a manner to prevent unauthorized use; and either blank-flanged or otherwise disconnected from facility piping. The facility shall notify the department when a tank is removed from service and when the actions required by this subsection are completed. In this subsection, “removed from service” means not in regular use for the service intended and not included in a regular maintenance and inspection program.

2.1.8 SECONDARY CONTAINMENT REQUIREMENTS FOR OIL STORAGE TANKS [18 AAC 75.075]

Secondary containment is provided for all onshore ADEC-regulated tanks. Diked areas for tanks containing hydrocarbons are typically lined with a synthetic liner and sized for at least 100 percent capacity of the largest single tank, plus an additional volume for precipitation. Liners are resistant to operational damage and weather, and are sufficiently impermeable as required by 18 AAC 75.075(a)(2).

The following is a description of the secondary containment design and capacities.

- The 10,000-bbl tank at GPTF has a secondary containment area capable of handling a 12,000 bbl release. The secondary containment area is lined with a thick impermeable synthetic liner material.
- The crude oil storage tanks at DRT are located in secondary containment dikes that are capable of holding a minimum 110 percent of the tank capacity. The containment area is lined with a geosynthetic clay liner, which consists of bentonite clay contained within a non-woven polypropylene geotextile (manufactured by Synthetic Industries). A polyurea spray-applied coating (Henry Products #7000 applied to 20 to 40 mil) is used to tie the liner to the tank. The liner system permeability is in compliance with ADEC requirements. Fill is placed above the liner in trafficked areas in order to protect the liner system. Additional details of the liner system are on file with ADEC in Anchorage.
- Tanks 1 and 2 are contained within a combined geosynthetic clay-lined earthen dike secondary containment area.
- Tanks 3 and 4 are contained within another combined geosynthetic clay lined earthen dike secondary containment area. These two containment areas are adjacent to each other and connected by two 30-inch-diameter pipes, allowing the entire combined secondary containment system to be available to each of the four tanks.

The ADEC-regulated diesel tank on the Christy Lee Platform does not have secondary containment, as the tank is integral to the platform structure, and adding secondary containment is not physically feasible [18 AAC 75.075(b)].

Secondary containment is maintained free of debris, vegetation, excessive accumulated water, or other materials or conditions that might interfere with the effectiveness of the system. Facility personnel visually check for the presence of oil leaks or spills within secondary containment areas during routine operations and, unless precluded by safety concerns or weather conditions, conduct documented weekly inspections of secondary containment areas, including checking for:

- Debris and vegetation,
- Proper alignment and operation of drain valves,
- Visible signs of oil leaks or spills, and
- Defects or failures of the secondary containment system.

Facility personnel inspect accumulated water prior to discharging it from a secondary containment area to ensure that no oil will be discharged. Drainage is controlled by positive close valves to prevent discharges. A written record of each drainage operation and whether a sheen was present or not will be maintained for at least 5 years as required by 18 AAC 75.075(d). Oily water found in accumulation areas is not discharged without a permit. Valves are closed and secured when not in use.

2.1.9 FACILITY OIL PIPING REQUIREMENTS [18 AAC 75.080]

Facility oil piping includes the lines within and from the DRT Tank Farm to the Christy Lee Platform. This piping system includes two main components:

- Single 42-inch line from the Tank Farm to the vicinity of Sphere Building (ballast control facility). The line takes crude oil from the Tank Farm to dual 30-inch lines discussed below. The piping was installed in 1966/67 and includes approximately 3,000 feet of buried line. The pipe has a 0.5-inch wall thickness and is wrapped with a bitumen coating.
- Dual 30-inch lines from the vicinity of the Sphere Building to the Christy Lee Platform. The piping was installed in 1966/67. Both are capable of transporting crude oil to the tanker. Both lines are buried and each approximately 14,000 feet long with approximately 10,000 feet located offshore. The onshore piping is wrapped and has a 3/8-inch wall thickness; the offshore piping has a 0.5-inch wall thickness.

In accordance with 18 AAC 75.080(b), a corrosion control program is maintained for all metallic facility piping containing oil. As per 18 AAC 75.080(j), a maintenance and inspection program consistent with requirements of API 570 is in place. Piping placed in service after December 30, 2008, is designed and constructed in accordance with one of the standards specified in 18 AAC 75.080(c) and (e).

As required by 18 AAC 75.080(d), existing buried piping is of all-welded construction and protected from corrosion by a protective wrapping or coating and cathodic protection, such as a polyethylene plastic liner with joints either protected with shrink sleeves or tape, as appropriate for local soil conditions. No piping larger than a 1-inch nominal pipe size is clamped or threaded. CIPL maintains a corrosion inspection and maintenance plan applicable to buried and submerged steel piping containing or transporting oil. Best Available Technology (BAT) presented in Part 4 contains additional information on pipeline and piping protection and maintenance.

All cathodic protection systems installed after December 30, 2008, on facility oil piping are consistent with NACE International's *Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping Systems* (NACE RP0169-2002), designed by a corrosion expert, and installed under the supervision of a corrosion expert in accordance with 18 AAC 75.080(f).

In compliance with 18 AAC 75.080(g), when any buried pipe section is opened or removed from a piping system, that pipe section and any adjacent pipe section is visually inspected in accordance with API 570 Section 9.2.6, *Piping Inspection Code: Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems,* for evidence of internal corrosion. If internal corrosion is visually noted, other non-destructive testing techniques are used to quantify the extent of corrosion damage and determine corrective actions.

Cathodic protection checks (rectifier readings) are conducted every 2 months. Cathodic protection surveys using pipe-to-soil potentials are performed annually in accordance with NACE RPO 169.

In addition to buried or submerged sections, all points where the pipe enters or leaves soil is examined at the soil-air interface and for a minimum distance of 18 inches below grade. Thickness and interior condition is determined at all inspection locations using ultrasonic instruments or radiography. If external pitting is observed, pit depths may be measured with a pit depth gauge or ultrasonic instrumentation.

Piping removed from service for more than 1 year is to be physically removed or may be drained, identified by origin, stenciled with the words "Out of Service," and isolated using caps, blind flanges or spectacle blinds, as required in 18 AAC 75.080(o).

Onshore aboveground piping is inspected for leaks and damage daily, and documented every 30 days using the Operations Routine External Examination Checklist, which is part of the Monthly Inspection Report for land-based facilities, as required by 18 AAC 75.080(b). Because of drainage controls onshore (notably the drainage ditches), spills from other onshore piping would not reach open water.

Aboveground facility piping is supported consistent with the requirements of Paragraph 321 of the American Society of Mechanical Engineers' Process Piping (ASME B31.3-2004). Onshore aboveground piping is located in areas with appropriate measures, such as warning signs and barriers, to reduce the likelihood of damage by vehicles.

OFFSHORE PIPING

The piping between the tank farm and the offshore loading platform is hydrostatically tested annually in accordance with USCG requirements. An annual cathodic protection survey is conducted on the offshore buried piping. Other piping on the offshore platform is associated with the on-site diesel storage system and contained within the secondary containment provided by the platform structure.

Per 18 AAC 75.080(n)(1), all platform transfer piping that is used to transfer oil will be visually checked before and during each transfer or monthly, whichever is less frequent.

2.1.10 OFFSHORE PLATFORM

The offshore Christy Lee Platform complies with USCG 33 CFR—Navigation and Navigable Waters, and DOT Part 126, 154, and 156. The loading platform is manned on a 24-hour basis when transfer operations are in progress. During transfer operations, the operator maintains radio contact with DRT. Transfer operations are discussed in Section 2.1.5.

The platform has remote pump shutdown capabilities, along with isolation MOVs to the loading arms. The area beneath the 16-inch loading arms is surrounded by a perimeter curbing to confine spillage or leakage. During vessel loading, deck drainage plugs are installed in this containment area. The loading arms are properly secured when not in service.

Vessel filling operations are controlled directly from the operations control tower, located on the platform. Visual observation would be the most probable means of spill detection. No more than two of the three platform loading arms are in operation at a time. The crew is responsible for monitoring transfer operation. If a discrepancy is found, the operator may shut down the tanker loading operations by dialing the number 332 on the operations network phone or pressing the emergency stop from the control panel. Prompt and positive detection of an oil or hazardous materials spill directly affects the ability to contain, clean up, and dispose of the spilled materials.

During winter months, CIPL has also implemented self-imposed procedures to minimize potential spills resulting from ice conditions. These rules for tanker loading operations include:

- Establishing ice watches any time that ice is known to be in the general area.
- If ice pans are present at the loading platform during a flood tide, loading operations are suspended and loading arms are disconnected.

2.2 DISCHARGE HISTORY [18 AAC 75.425(e)(2)(B)]

Table 2-1 provides a summary of oil spill history for CIPL assets covered in this ODPCP during the period of 1973 to present. Table 2-2 provides a summary of the distribution of spills by size, materials, location, method of detection, and cause. As indicated on Table 2-2, the following can be summarized with respect to the spill history at the CIPL facilities:

- Spills between 1 and 10 bbl accounted for over half of the indicated spills greater than 1 bbl.
- Over 80 percent of the spills involved crude oil.
- Over half of the spills occurred onshore at the DRT. Pipeline-related spills accounted for over one-quarter of the spills.
- All spills were initially detected by direct visual means.
- Approximately two-thirds of the spills were a result of some sort of mechanical failure. Typical mechanical failures included gasket/seal failure or pipe/piping leaks.

Specific procedures used to mitigate potential spills include:

- Continued use of visual monitoring as a tool for detecting minor spills or problems that may lead to spills.
- Continued implementation and use of a computer-based preventive maintenance program to reduce the potential for operational spills resulting from mechanical failures.

TABLE 2-1: OIL SPILL HISTORY

DATE	LOCATION	VOLUME	CAUSE	CORRECTIVE ACTION
1/6/73	DRT	300 bbl	Mechanical damage to 20-inch fill.	Line repaired.
9/6/77	Christy Lee Platform	40 gallons	Seal failure.	Replaced seal.
11/9/81	Christy Lee Platform	60 gallons	Blind flange gasket leak.	Replaced gasket.
8/27/84	West Foreland Junction	40 bbl	1-inch vent valve opened.	Locked and plugged valve.
9/16/84	Christy Lee Platform	3 bbl	Seal failure during hydrostatic testing (non-operational spill).	Replaced seal.
12/20/89	Granite Point Tank Farm	8 bbl	Tank overfilled.	Repaired high tank alarm and installed a high-high liquid-level shutdown.
3/10/90	DRT	2,300 bbl	Valve left open on Tank 3 (operator error).	Closed and plugged valve.
3/21/90	DRT	640 gallons (Jet B)	Leak in 3/4-inch pipe.	Pipe was replaced.
12/28/93	DRT	400 bbl	Ice from Tank 4 roof fell onto and cracked nipple of Butterworth system.	Removed pipe and plugged fitting.
8/05/94	DRT	5 bbl	Gasket failure on Tank 4.	Gasket was replaced.
10/5/96	WFPS	90 bbl	Corrosion hole in 20-inch pipe.	Cut out corroded sections and capped ends.
2/16/97	DRT	550 gallons (diesel)	Leak in 1/2-inch fill line.	Line was replaced.

TABLE 2-2: ANALYSIS OF SPILLS (> 1 BBL) AT THE CIPL FACILITIES

DESCRIPTION	NUMBER OF SPILLS	PERCENT OF SPILLS
Size of Spill		
> 1,000 bbl	1	9
100 – 1,000 bbl	2	18
10 – 100 bbl	2	18
1 – 10 bbl	6	55
Material Spilled		
Crude Oil	9	82
Refined Hydrocarbons	2	18
Location of Spill		
Pipeline	3	27
Drift River-Onshore	6	55
Drift River-Offshore	2	18
Method of Detection		
Mechanical/Electrical	0	0
Direct Visual	11	100
Cause of Spill		
Mechanical Failure	7	64
Accident/Damage	3	27
Human Error	1	9

2.3 POTENTIAL DISCHARGE [18 AAC 75.425(e)(2)(C)]

The potential for spills from CIPL assets is understood from historical spill data. Spill size, frequency, cause and location information were presented in Section 2.2 as part of the discharge history. CIPL's inspection programs and leak detection equipment limit potential spill duration to between a few minutes to a few hours.

2.3.1 POTENTIAL DISCHARGE SPILL VOLUMES

Table 2-3 summarizes the maximum potential discharges from the various components of the CIPL operations.

TABLE 2-3: MAXIMUM POTENTIAL SPILL VOLUMES FOR VARIOUS SPILL SOURCES

	TYPE OF FAILURE	CONTENTS	MAXIMUM TANK VOLUME	CURRENT PIPELINE/ PIPING OPERATING CONDITION		MAXIMUM ALLOWABLE RATE[a]	SECONDARY CONTAINMENT
				NORMAL MINIMUM FLOW	NORMAL MAXIMUM FLOW		
Crude Oil Storage Tanks	Rupture or overfill	Crude	270,000 bbl each	400 bbl/hr	3,600 bbl/hr	7,500 bbl/hr	Dike: > 110%
Loading Pipeline: Drift River Tanks to Platform	Rupture or leak	Crude	--	11,000 bbl/hr	33,000 bbl/hr	55,000 bbl/hr	Variable
Pipeline: GPTF/Trading Bay to Tanks at DRT	Rupture or leak	Crude	10,000 bbl	800 bbl/hr	3,600 bbl/hr	4,775 bbl/hr	Variable
Helicopter Fuel	Tank rupture/ overfill, pipe leak	Jet B	143 bbl	5 gpm	10 gpm	--	Dike: > 110%
Storage Supply	Tank rupture	Diesel	191 bbl	--	--	--	Dike: > 110%

Note:

a. Per DOT regulations (49 CFR 195).

The maximum potential discharge would be from a tank and is equivalent to the total contents of the tank. The facility has four large crude oil tanks that are in the inspection and maintenance programs. Each has a capacity of 270,000 bbl for a total volume for all major crude oil tanks at the DRT of 1,080,000 bbl. In addition, there are two 270,000-bbl tanks that are empty, isolated from the system and not intended to be used. All crude oil aboveground storage tanks have a secondary containment with a capacity to hold at least 110 percent of the capacity of any of the tanks.

The maximum release from a pipeline is equivalent to the line fill plus the amount of oil that can discharge prior to discovery of the release and isolation of the line by valve closure. Table 2-4 shows the estimates of releases from the terminal piping. Discharge prevention has been augmented with the use of internal inspection tools, measures taken in the operation, maintenance of the pipeline, aerial surveillance of the right-of-way, and river inspections. The present operating pressure, being a fraction of its design capability, makes the likelihood of a substantial discharge highly unlikely. This is further reduced by the presence of the SCADA system and MOVs at major river crossings.

TABLE 2-4: POTENTIAL SPILL ESTIMATES FOR TERMINAL PIPING RELEASES

	LINE FILL (BBL)	VOLUME SUBJECT TO GRAVITY DRAINAGE (BBL)	VALVE CLOSURE TIME (SECONDS)	RELEASE PRIOR TO VALVE CLOSURE (BBL)[a]	TOTAL POSSIBLE RELEASE (BBL)[b]
Tank Farm Piping					
10-inch relief line	80	minimal	50	30	30
20-inch recirc line	300	minimal	90	700	700
20-inch fill lines	700	80	90	50	130
36-inch suction lines	730	260	175	490	750
42-inch suction lines	3,300	minimal	195	540	540
Loading Pipeline					
42-inch loading line	6,900	3,900	195	2,200	6,100
30-inch N. loading line	11,600	8,000	90	500	8,500
30-inch S. loading line	11,600	8,000	90	500	8,500

Notes:

a. Maximum release prior to complete closure of valve.

b. Maximum release prior to valve closure plus amount subject to gravity drainage.

Other potential sources of spills are the aboveground fuel storage tanks used for vehicles, generators, boilers, helicopters, and pump engine fuels. It is possible for their products to leak from delivery and transfer operations, but such releases are expected to be small and quickly detected.

2.4 CONDITIONS INCREASING RISK OF DISCHARGE [18 AAC 75.425(e)(2)(D)]

2.4.1 EARTHQUAKES OR VOLCANIC ACTIVITY

The greatest risk of catastrophic discharge would result from an earthquake of significant magnitude. DRT, constructed in 1966 in accordance with applicable codes and standards, has withstood years of earthquakes with no oil spills directly attributable to earthquakes. A catastrophic release of fluids from storage tanks or piping would be contained within the established secondary containment areas. In the unlikely event of flooding into the DRT from Rust Slough, the facility would be shielded by a levee flood control system.

If an earthquake occurs during fuel transfer, all transfer operations will be immediately shut down and terminated until all systems are visually and/or manually inspected for operational and structural integrity. Once the system is shut down, transfer operations will not resume until the Terminal Operations Supervisor determines that it is safe to do so.

Major eruptions of Mt. Redoubt have occurred in 1989, 1990, and 2009 and affected the DRT. The more recent eruptions in 2009 resulted in lahars advancing on the DRT. Levee and flood control systems have been constructed to divert potential floodwaters and lahars from the tank farm. A 2012 reestablishment and design of the levee flood control system takes into account current site conditions and recent volcanic activity. See Figure 2-1. The redesigned levee flood control system and volcano monitoring and preparedness are detailed in Section 3.11.

2.4.2 FLOODS

DRT is located within the Drift River 100-year floodplain area. Flooding at DRT is caused by heavy rains, snow and glacial runoff, and volcanic activity. Volcanic activity in 1990 caused floods from Rust Slough and Drift River. As a result of these floods, a levee flood control system was implemented to allow the slough and river to flow away from the seven 270,000-bbl tanks. In 2012 the levee flood system was redesigned to take into account changed site conditions as a result of the 2009 lahar.

The implemented levee flood control system consists of a flood-control dike upstream from Drift River and Rust Slough. An 8-inch concrete matting was used to line the dike. Each portion of the dike has been set 5 feet above the 100-year floodplain water surface to allow for a worst-case drainage system.

After the 2009 lahar event from Mt. Redoubt, flood control protection integrity was increased. This included modifications of the existing flood control berm system by increasing the design height of the existing flood-control berms through addition of site mineral materials and/or installation of sheet pile. A description of the flood-control system is in Section 3.11.

FIGURE 2-1: DRIFT RIVER TERMINAL LEVEE DIAGRAM

2.4.3 VESSEL TRAFFIC PATTERNS

Large vessel traffic is common in the Cook Inlet area. Additional smaller fishing and workboats may transit the area. The DRT dock is well marked with navigational aids and the area is sufficiently unobstructed to not provide any unusual hazards to vessel navigation.

Navigational hazards, such as collisions with other vessels, icebergs, or uncharted obstructions, increase the risk of discharge on the platform. To minimize the risk, all Vessel Masters will comply with existing vessel transit separation patterns and operate within established shipping lanes when present. Bridge personnel and deck watch will operate and man radar equipment at all times within Alaskan state waters.

Vessel traffic hazards are identified in the USCG Pilot Manual for physical hazards in Cook Inlet.

2.4.4 PHYSICAL OR NAVIGATIONAL HAZARDS, INCLUDING ICE

Navigational ice hazards are applicable during the months of November through April. Information on ice concentrations and types in Cook Inlet through the winter is presented in Section 3.4.4. Severe sea ice could present a problem for vessel operations transferring oil from the platform. To minimize the risk, the Vessel Master will perform continuous deck watch and man radar at all times within Cook Inlet and Alaskan state waters. In addition, all vessels will contact the DRT operator prior to entering Cook Inlet to determine if weather conditions are safe and if sea ice is present.

Docking in ice at the DRT:

- When docking at berths where ice flows may be experienced, every effort should be made to dock the vessel so the bow stems the heaviest ice flow.
- Ice accumulation on the hull will cause the steady buildup of very heavy stresses on the mooring lines. Additional crews will be established at the dock if this condition occurs.
- The current policy is not to load vessels in heavy ice conditions on flood tides.

2.5 DISCHARGE DETECTION [18 AAC 75.425(e)(2)(E)]

DRT is the remote control operations center and termination point for this system. The operations center is monitored 24 hours per day. A SCADA panel has been installed to indicate malfunctions at DRT.

Terminal operators make routine inspections to check for proper operation of equipment, leaks, process upsets, or other problems. They are required to make these inspections at least once each day.

Required inspections follow written procedures. A major portion of the operations and maintenance schedule is concerned with surveillance and monitoring of the terminal and pipeline's equipment. Personnel are continuously on watch for potential spills while performing these duties.

The visual surveillance schedule is provided in Table 2-5.

TABLE 2-5: DISCHARGE DETECTION AND VISUAL SURVEILLANCE SCHEDULE

COMPONENT	ACTIVITY	FREQUENCY
Crude Oil Transmission Pipeline	Surveillance	Weekly aerial surveillance, unless precluded by safety or weather conditions
	Discharge detection: flow verification	Line balances checked every hour using remote surveillance system
	Discharge detection: daily discharge	Inventory and day's activities documented in Morning Report
Oil Storage Tanks	Visual tank inspection	Twice daily
	Overfill alarms	Prior to tank loading or weekly
Secondary Containment Areas	Visual Inspection	Daily
Fuel Transfer at Christy Lee Platform	Surveillance during transfer operations Constant radio contact between platform and terminal Visual monitoring from control tower	During all crude transfers

2.5.1 DISCHARGE DETECTION FOR CRUDE OIL TRANSMISSION PIPELINE

Leak detection for the crude oil transmission pipeline is discussed in Section 2.1.6.

2.5.2 DISCHARGE DETECTION FOR ONSHORE ABOVEGROUND OIL TANKS

The ADEC-regulated tanks at GPTF are visually checked a minimum of one time per week by CIPL personnel and recorded in the Station Check logbook. The operator gauges the tanks every hour and calculates a line over and short to determine the operating condition of the system.

Onshore aboveground tanks located at the DRT are visually inspected twice daily by on-site operators/technicians. The inspections are documented on a Daily Tank and Building Inspection log. The inspections consist of checking the base and sides of tanks, valves, and associated piping for leakage, drip pan levels, abnormal condition of lights and appurtenances, and visual inspection of secondary containment and levee and dike system.

The operator continuously monitors and records:

- Suction pressure
- Discharge pressure status of the equipment
- Idle tanks for level changes

Data is gathered daily by the Terminal Operator and recorded on the daily log sheet and sent to the Anchorage office each morning.

2.5.3 DISCHARGE DETECTION FOR TERMINAL FACILITY PIPING

Discharges from facility piping would be detected by local- and remote-controlled instrumentation. Operations personnel also serve to detect aboveground leaks through their daily surveillance of the facilities.

2.5.4 DISCHARGE DETECTION FOR OFFSHORE TANKS AND PIPING

Discharge detection for the Christy Lee Platform storage tank and piping consists of surveillance during transfer operations, constant radio and telephone contact between the platform and the terminal, and visual monitoring from the control tower.

2.6 WAIVERS [18 AAC 75.425(e)(2)(F)]

Waivers follow this page. Waiver content is as follows:

- USCG Waiver of the requirements of 33 CFR, Part 105 (October 2010)

U.S. Department of Homeland Security

United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W., Stop 7581
Washington, DC 20593-7581
Staff Symbol: CG-5442
Phone: (202) 372-1177
Fax: (202) 372-1906

16600

Mr. Rod Ficken
Cook Inlet Pipe Line Company
Drift River Oil Terminal
P.O. Box 91159
Anchorage, AK 99509-1159

OCT 14 2010

Dear Mr. Ficken:

I have reviewed your submission, received on July 8, 2010, wherein you requested a waiver from all of the requirements of part 105 of Title 33 of the Code of Federal Regulations (33 CFR part 105) for your facility located on the Cook Inlet, Alaska. After a thorough review of the current operations of the Drift River Terminal, it has been determined that the facility is no longer engaged in the storage of oil from tanks on the facility. This is a significant operational change which lowers the potential of a Transportation Security Incident (TSI). Therefore, I am approving this waiver.

However, because this facility maintains a backflow tank with a capacity of 210,000 gallons, this approval is based upon the condition that any backflow product will not be retained for any length of time. Additionally, since this facility will continue to receive 33 CFR 104 regulated vessels; Cook Inlet Pipe Line Company must ensure these vessels have adequate security measures in place during cargo transfer and vessel interface with the Christy Lee Platform.

As a reminder, your facility is still subject to 33 CFR parts 101, 103 and 154. Please continue to work with your local COTP to ensure that physical security is adequate. If there are any changes to the current operations this waiver is subject to review.

If you have any questions regarding this decision, please contact Myra Gerald at 202-372-1165.

Sincerely,

DAVID W. MURK
Commander, U.S. Coast Guard
Chief, Cargo & Facilities Division
By direction

Copy: Commander, U.S. Coast Guard Pacific Area (PAC-3)
Commander, U.S. Coast Guard Seventeenth District (dp)
Commander, U.S. Coast Guard Sector Anchorage (sp)

PART 3. SUPPLEMENTAL INFORMATION

3.1 FACILITY DESCRIPTION AND OPERATIONAL OVERVIEW [18 AAC 75.425(e)(3)(A)]

3.1.1 GENERAL

CIPL operates in the Cook Inlet, and its facilities include:

- GPTF
- WFPS
- Cook Inlet Pipeline, a buried crude oil transmission pipeline that transports crude oil from GPTF and WFPS to the DRT
- DRT
- Christy Lee Offshore Loading Platform

The facility's north boundary is at the meter building sales meter located at the GPTF (Milepost 42.0). The GPTF has one 10,000-bbl tank that stores crude oil prior to entering the 20-inch crude oil transmission pipeline. The buried pipeline transports crude oil in batch shipments from GPTF to the 270,000-bbl oil storage tanks at the DRT.

The WFPS operation, located at Trading Bay, begins at the sales meter within the pump station. A 12-inch crude oil transmission pipeline from the WFPS runs approximately 2 miles to connect to the 20-inch pipeline at Milepost 19.8. The WFPS receives oil from two 40,000-bbl tanks and two 10,000-bbl tanks, all of which are owned and maintained by HAK and not included in this ODPCP. Oil is transmitted in batch shipments from the WFPS to the 270,000-bbl oil storage tanks at the DRT.

The 20-inch pipeline ends at the DRT (Milepost 0.0). The DRT contains six 270,000-bbl storage tanks, described in Table 3-1. Two ballast water tanks (B-1 and B-6) are located at DRT but no longer used to store fluids, and therefore are not listed in Table 3-1.

From the DRT, crude oil traverses a 42-inch mainline to the Sphere Building, approximately a half mile from the terminal. At the Sphere Building, crude oil is transitioned to two 30-inch loading lines that travel to the Christy Lee Offshore Loading Platform. From the loading platform, the 30-inch loading lines transition to three 24-inch loading lines that feed the 16-inch loading arms. The platform is located approximately 2.6 miles from the mean high tide line. The platform berth is of steel construction and spans 780 feet from northeast to southwest. Operations at the Christy Lee Platform are fueled by a 34,000-gallon diesel storage tank.

3.1.2 CRUDE OIL TRANSMISSION PIPELINES

The GPTF to DRT crude oil transmission pipeline consists of 41.5 miles of pipeline. An injection pipeline connects with the mainline 19.8 miles north of the DRT. The injection consists of 2.5 miles of 12-inch diameter pipe between the WFPS and the mainline. There is a block valve located at this junction and mileposts 41.2, 28.5, 28.1, 19.8, 17.0, 15.6, 7.9, 7.2, and the DRT. The valves at mileposts 28.5, 28.1, 17.0, and 7.9 are remotely activated MOVs. Check valves are also located at mileposts 15.6 and 7.2. In the event of release, these strategically located block valves can be closed to isolate a section,

minimizing the spill volume. Pipeline flow can be completely stopped immediately upon detection of a leak by shutting down pumps through the control panel at the DRT.

DRT is a remote operations center and termination point for the 20-inch mainline. The operator continuously obtains data, including meter readings and tank inventory (DRT and GPTF), and maintains remote start/stop capabilities. Incoming field receipt meters are compared with field volumes from GPTF and WFPS on a daily basis for flow verification. The SCADA system on the pipeline has a reporting accuracy of 1 percent under normal operating conditions.

The total line fill for the system is 122,161 bbl, with a maximum daily pumping rate of 114,600 bbl. The crude oil transmission pipeline is 20 inches in diameter, with a wall thickness of 1/4 inch, except where it crosses rivers or streams. At these points, wall thickness has been increased to 1/2 inch with a 4-inch concrete casting added to the pipe for prevention of surface damage. The crossings of McArthur River, Kustatan River, Big River, Montana Bill Creek, and the former Drift River channel have been horizontally directionally drilled, eliminating the risk of pipeline scouring. The pipeline has been buried to a minimum depth of 4 feet.

The maximum flow rate from the pipeline into the crude oil tankage is about 3,400 bbl per hour and monitored 24 hours a day by the Terminal Operators. Line balances are continually monitored through the SCADA system.

GPTF station and WFPS are equipped with mercoid switches on the discharge and suction. This equipment automatically prevents the station suction pressure from falling below a pre-set minimum and the station discharge from exceeding a pre-set maximum. During high-pressure shutdown, the stations will remain down until the cause is determined and corrected. Pressure limitations and control equipment are as follows:

PIPELINE SEGMENT	MAXIMUM OPERATING PRESSURE	PRESENT HIGH DISCHARGE
GPTF - DRT	600 psig	140 psig
WFPS - DRT	600 psig	150 psig

DRT is equipped with 8-inch and 4-inch back-pressure valves set to hold 60 pounds per square inch (psi) on the mainline between GPTF and DRT. The 20-inch mainline at DRT is also equipped with a spring-loaded 10-inch pressure relief valve. The current throughput requires an operating pressure less than 125 psi; the discharge pressure limit has been set at 150 psi with a relief valve setting of 125 psi at DRT. Pressure of more than 125 psi causes the relief valves to open automatically, diverting the flow to relief Tank 3, which limits the line pressure to 125 psi. Current operating pressure settings are 13 percent of the maximum allowable pressure of the pipeline.

The pipe support design is a concrete base with a steel beam welded to the saddle. Pipeline terminal connections are capped or blank-flanged and marked if the pipeline is not in service or on standby service for extended periods. All aboveground piping is protected by flagged railings.

Crude oil piping is coated, wrapped, and protected with impressed current cathodic protection systems. As existing valves are replaced, valves containing internal corrosion-resistant trim are installed. Stream crossing surveys at navigable rivers are conducted at least once every 5 years in accordance with 49 CFR Part 195.412 and more frequently dependent upon riverbed conditions. GPTF and WFPS are

checked a minimum of one time per week by CIPL personnel and recorded in the Station Check logbook. Pressures and meter readings from these stations are monitored continuously via microwave telemetering at DRT Operations console. These readings are logged every hour by the Terminal Operator and recorded on the Daily Operations Log Sheet.

3.1.3 OIL STORAGE CONTAINER INFORMATION

Per 18 AAC 75.065, tank construction and materials are compatible with the substances stored. Tank roofs are reinforced to withstand snow loads for the region. The tank base pads are well-compacted select materials of rock, gravel, and sand. The tanks are equipped with vents, local visual liquid-level gauges, remote liquid-level gauges, and cathodic protection. Remote liquid-level gauges are monitored on an hourly basis and an alarm will sound when liquid levels vary by 1/8-inch or more between subsequent readings.

Table 3-1 lists the number, type, location, and oil storage capacity of the CIPL ADEC-regulated tanks. See Section 1.8 for facility diagrams.

TABLE 3-1: CIPL ADEC-REGULATED TANK LIST

TANK	LOCATION SERVICE STATUS	DESCRIPTION	VOLUME (BBL)	CONTENTS	CONSTRUCTION STANDARD YEAR BUILT	LAST INSPECTION	OVERFILL PREVENTION	SECONDARY CONTAINMENT CAPACITY (BBL)
1	DRT Isolated from system; maintained and inspected	Vertical Cylinder on grade	270,000	Empty	Welded steel API 650 1967	Internal 2003 External 2008	HLA, HHLA, RLG	N/A (empty)
2	DRT Isolated from system; maintained and inspected	Vertical Cylinder on grade	270,000	Empty	Welded steel API 650 1967	Internal 2004 External 2004	HLA, HHLA, RLG	N/A (empty)
3	DRT In service	Vertical Cylinder on grade	270,000	Crude oil	Welded steel API 650 1967	Internal 2010 External 2010	HLA, HHLA, RLG	413,000
4	DRT In service	Vertical Cylinder on grade	270,000	Crude oil	Welded steel API 650 1967	Internal 2007 External 2007	HLA, HHLA, RLG	413,000
5	DRT Out of service; isolated from system	Vertical Cylinder on grade	270,000	Empty	Welded steel API 650 1967	N/A	None	N/A (empty)
6	DRT Out of service; isolated from system	Vertical Cylinder on grade	270,000	Empty	Welded steel API 650 1968	N/A	None	N/A (empty)
GP-1	GPTF In service	Vertical Cylinder on grade	10,000	Crude oil	Welded steel API 650 1968	Internal 2004 External 2009	HLA, RLG, HHLSD	12,000
CL-4	Christy Lee Platform In service	Offshore Platform Tank	805	Diesel	Welded steel Integral to structure 1966	Internal 2004 External 2004	None	None

3.1.4 PIPING SYSTEMS

Piping systems are located at the GPTF, WFPS, and at the DRT/Offshore Loading Platform. Table 3-2 provides descriptions of individual pipelines. Appendix A provides detailed piping diagrams.

TABLE 3-2: CIPL PIPELINE DESCRIPTIONS

LINE	PRODUCT	LENGTH (FT)	DIAMETER (INCHES)	AVERAGE FLOW RATE (BBL/HR)
Main Line from GPTF to Main Line Junction with the WFPS Line				
Main Line	Crude	117,216	20	600
WFPS Line to Main Line Junction				
WFPS	Crude	10,560	12	735
Main Line Junction to DRT				
Main Line	Crude	104,544	20	1335
DRT Lines to Christy Lee Offshore Loading Platform				
Tank Farm to Sphere Building	Crude	10,560	42	
Sphere Building to Platform	Crude	12,672	30	
Sphere Building to Platform	Crude	12,672	30	

3.1.5 TRANSFER PROCEDURES

Transfer procedures (onshore and offshore) are described in Section 2.1.5.

3.2 RECEIVING ENVIRONMENT [18 AAC 75.425(e)(3)(B)]

3.2.1 GENERAL

A discharge associated with CIPL operations could impact the surrounding land, rivers or Cook Inlet. A discharge from the onshore pipeline operations would either flow directly to land or directly to streams; in both cases, spills could potentially reach Cook Inlet.

A discharge at the DRT would initially be to land and likely not impact open water, even with the worst case discharge (tank failure). Discharges from pipelines to the offshore loading facility or from the offshore loading facility directly would be contained on the offshore loading facility or flow directly into Cook Inlet. The following subsections outline possible routes of the discharges and possible quantities of oil that may reach open water.

3.2.2 ROUTES OF DISCHARGE

PIPELINE SPILLS

Spills from the pipelines would either be directly to land or streams that the pipeline crosses. Spills reaching streams would likely flow into Cook Inlet if not contained. Maps contained in Section 1.8 indicate the pipeline location and potential routes of flow from pipeline spills.

Most streams crossed by the pipeline have sandy or silty banks, and larger streams are glacier-fed.

Sensitive areas that would be directly impacted by a potential pipeline spill include:

- Trading Bay State Game Refuge
- Redoubt Bay Critical Habitat Area

The pipeline crosses both of these sensitive environments, which are regulated by the State of Alaska.

DRT ONSHORE SPILLS

Spills from the onshore portion of the DRT would likely remain on site. As described in Section 2.1, the major tanks all have secondary containment with sufficient capacity to contain the largest possible spill. Additional protection is provided from the diversion levee.

Although the facility is located near the boundaries of the Redoubt Bay Critical Habitat Area, it is unlikely that spills would flow past the facility boundaries to impact this area.

OFFSHORE DRT SPILLS

Spills from the offshore portion of the DRT (Christy Lee Platform and associated pipelines) would either be contained on the platform or flow into Cook Inlet. Figures in Section 1.6 show potential locations of spills from the platform after 1, 3, and 15 days. Within 1 day, the spill would be within the range between West Forelands (to the north) and Tuxedni Bay (to the south). After 3 days, a platform spill could reach various places within Cook Inlet and is fairly unpredictable. The Cook Inlet Subarea Contingency Plan identifies the many sensitive coastal habitats and areas along Cook Inlet.

3.2.3 ESTIMATE OF RESPONSE PLANNING STANDARD TO REACH OPEN WATER

For the Middle River pipeline rupture, both summer and winter scenarios, all of the oil will leak directly over the Middle River with most of the oil entering open water. None of the oil spilled from the oil storage tanks in the scenario in Section 1.6 would enter open water. For the Christy Lee Platform, oil spilled would enter open water. See the response planning standards in Section 1.6 for details.

3.3 COMMAND SYSTEM [18 AAC 75.425(e)(3)(C)]

3.3.1 OVERVIEW

CIPL will organize under the ICS structure when conducting a response to a significant oil discharge. Section 1.2 of this ODPCP provides details of CIPL ICS structure. The ICS structure is detailed in the Alaska Incident Management System (AIMS) Guide, which is adopted under the Alaska UC, and with which this ODPCP is compatible. The ICS structure detailed in the AIMS Guide is based on the NIMS with modifications to address oil and hazardous substance spill response.

The designated IC will have primary operational control of spill response activities. The IC will lead a team consisting of an Operations Section, a Planning Section, a Finance Section, a Logistics Section, and Command Staff. Drills are performed in accordance with National Preparedness for Response Exercise Program (NPREP) standards, and employees assigned to the ICS mobilize to the designated command center to practice spill response scenarios. CIPL's ICS organizational structure is provided in Section 1.2 of this ODPCP. CIPL's IRT members are identified in Figure 1-1 and Table 1-2. These individuals would be the first members activated immediately following notification of an incident of significant size.

3.3.2 UNIFIED COMMAND

During the event of a significant spill, the UC will occur in compliance with all federal, state, and local laws. The implementation of a UC structure would be made up of CIPL's IC, a USCG representative, and an ADEC representative, as well as involving appropriate federal and state leaders.

3.4 REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS [18 AAC 75.425(e)(3)(D)]

3.4.1 GENERAL

This section discusses some of the conditions under which an oil spill response will be carried out. The on-site equipment at CIPL's onshore facilities is available for deployment in any environmental conditions in which personnel safety can be assured. Therefore, an initial response and recovery can be conducted at the onshore facilities during response activities assuring personnel safety.

Environmental and safety considerations potentially impacting a spill response are primarily weather-related and include:

- Low ceilings or reduced visibility
- Infrequent high winds
- Cold temperatures
- Available daylight
- Snow depth
- Volcanic activity

Besides adverse weather, personnel safety and equipment could restrict response operations.

Weather conditions may be different from the average data presented in the CISPRI *Technical Manual*. Communication is coordinated between CISPRI headquarters and the local weather station on an hourly basis. All personnel involved in spill response will be advised of the weather conditions so appropriate actions can be taken. CISPRI personnel are trained in adverse weather conditions and prepared to respond to a spill during adverse weather.

3.4.2 ADVERSE WEATHER CONDITIONS

WIND

Open Water: Wind will normally not be a controlling consideration in the deployment of oil spill response equipment. All of CISPRI's major skimmers, with the exception of those designated for harbor application, are capable of operating in Beaufort 3 to Beaufort 6 sea state. The wind designation for these conditions is 7 to 27 knots but can go as high as 60 knots.

High winds occur infrequently in Cook Inlet; however, high wind is taken into consideration when determining the drift of oil in a spill response and during deployment of equipment. See the CISPRI *Technical Manual*, Appendix B, for wind conditions.

On Land: Wind on land is also a consideration because of its potential effect on personnel. The Wind Chill Factor addresses this safety concern. Heavy clothing is a must to protect people from wind chill. Winter clothing will hinder the responder's ability to work quickly and efficiently in cold, windy weather. Wind chill may occur from air movement generated by automobiles, vessels or boats, aircraft, or helicopters. This condition may predispose personnel to frostbite or general hypothermia.

VISIBILITY

Visibility within Cook Inlet will not normally be a controlling consideration during spill response. CISPRI does have all the equipment and lights to operate when conditions are less than ideal with the assistance of radar.

Cook Inlet hosts a moderate year-round climate and will not normally cause problems in equipment deployment. CISPRI is aware of the dangers of low temperature extremes in Cook Inlet and has purchased equipment that addresses the local environment. CISPRI personnel are also well-versed in proper maintenance and storage of equipment during Cook Inlet's winter conditions, and have received cold-water survival training. See the CISPRI *Technical Manual*, Appendices A and B, for climatic conditions and equipment lists.

3.4.3 SEA STATES, TIDES, AND CURRENTS

CURRENTS OFFSHORE

Currents in Cook Inlet have a mean maximum tidal velocity of 7 knots. Peak maximum velocities can exceed 7 to 8 knots at monthly tidal extremes. The currents in Cook Inlet dominate circulation. The

CISPRI *Technical Manual* (Appendix B) maintains an extensive amount of weather information for Cook Inlet.

During the summer months, net outward movement of upper inlet waters can be as high as 1 mile during each tidal cycle. This is due to the large inflow of glacial melt water. During the winter months, with little glacial melt water, the net outflow is zero. The currents in Cook Inlet will not have any serious effects on CISPRI's ability to effectively deploy skimmers or boom. CISPRI has adopted response techniques that use the currents and convergent zones to assist in the collection of oil.

CURRENTS ONSHORE

Limitations of High Currents at Rivers and Streams: Breakup has the highest incidence of current flow; however, conditions during typical breakup allow for incident response. Boom, containment, and skimming capacity would still be effective under these conditions. CIPL and CISPRI personnel would travel along the access roads (where present) next to potential contaminated streams or Drift River performing skimming and containment operations.

Prevention Measures in High Currents: Most CISPRI offshore skimming equipment is capable of responding to currents up to 8 to 10 feet per second. Current conditions alone would not preclude spill response, but combined with fog they may slow spill response operations. If these conditions occur, spill response personnel will accomplish the following:

- Double the response personnel (buddy system);
- Provide containment with boom and anchor on the creek bank until weather clears;
- Curtail operations if fog or ice conditions become a personal safety issue; and
- Supply additional lighting along the contaminated creek or river.

Prevention Measures at the Ship Loading Platform (Christy Lee): Limitations may occur at the Christy Lee Offshore Loading Platform when pan ice is present in this area. As a prevention measure, all vessels maintain radio contact with DRT and USCG to receive updated weather and ice condition information. The vessels are advised by DRT of adverse operating conditions. The USCG Captain of the Port establishes weather, traffic patterns, and navigational hazard parameters that would close Cook Inlet to traffic and docking activities during hazardous condition situations.

In addition, during conditions of pan ice, the vessels accomplish the following as prevention measures on approach to the platform to receive oil:

- Turn on radar and other navigational aids to assist with navigation.
- Double the deck watch.
- Double the steering control.
- Under advisement of USCG or DRT, curtail operations until the hazardous condition improves.

DRT will request the vessel to harbor in Homer, until the weather or ice condition improves.

When moored at Christy Lee Platform, a vessel may experience ice accumulation around the hull. The following precautions will be observed when such a condition exists:

- The vessel will be asked to keep at a draft, which ensures that the sea suction and propellers are well below ice level.
- When docking at berths where ice flows may be experienced, every effort will be made to dock the vessel at the platform so the bow stems the heaviest ice flow.
- Ice accumulation on the vessel hull will cause steady buildup of heavy stress loads on the platform mooring lines. Additional crews will be established at the dock if this condition exists.

3.4.4 ICE AND DEBRIS

OPEN WATER

Four different types of ice generally are found in Cook Inlet, and all come from different sources. Sea ice forms in seawater as a thin crust. The ice becomes thicker by layers accumulating downward. The four types of ice include:

- Beach ice
- Stamukhi ice
- Estuary ice
- River ice

See the CISPRI *Technical Manual*, Appendix B, for details on ice formations and ice pack in Cook Inlet in the winter months.

ON LAND

Limitations of Ice and Debris on Land: Ice can impede or help a spill response. Normally, it is anticipated that recovery techniques can be used during spill response using some of the same spill-response methods as those on land. Significant ice (more than 50 percent coverage) has appeared at rivers in the area as early as November 30. Ice usually disappears in the spring as early as April 15 and as late as May 15. The thickness of ice normally increases through the beginning of December, forming solid ice by December 15.

In cases where fuel or crude oil would reach the solid or open ice floes, CISPRI and CIPL skimmers and other pumping systems can penetrate the ice and debris. Ice during breakup can cause ice slotting (large floating chunks of ice). This condition would most likely be the worst time of year concerning spill response. Limitations might be significant due to the fact that skimming and fuel-recovery systems would have a difficult time reaching the spill due to ice. Shoreline impact during the winter would be much less intrusive because fuel has a greater viscosity in colder temperatures. Shoreline penetration would be limited with the freezing shoreline, which prevents downward oil migration. Additionally, less wildlife is present in the winter months, which also helps mitigate shoreline impact.

Prevention Measures in Ice: CISPRI and CIPL are equipped with the proper equipment and trained personnel to provide the additional safety measures during adverse weather conditions. To reduce or prevent equipment from failing during cold weather, additional heat would be applied to the equipment during spill response.

Several prevention measures need to be deployed during spring break-up when ice slotting can occur. Ice chunks would have to be removed from any streams or lakes before fluid recovery and skimming could begin. Ice removal can be accomplished using heavy construction equipment. Using this equipment, the ice will be herded to the shoreline, allowing areas large enough to deploy boom and skim fuel off the open water.

3.4.5 HOURS OF DAYLIGHT

Cook Inlet experiences as little as 5.5 hours of daylight during the winter and up to 20 hours during the summer.

During the winter months, boom, skimmers and vessels are equipped with lighting capabilities to ensure safe and efficient deployment of the spill response equipment. Tracking systems have also been developed to track oil during dark periods. Strobes are also used to track oil during dark hours. See the CISPRI *Technical Manual* (CI-TS-0 through 4) for Tracking and Tracking Buoy Information.

3.4.6 VOLCANIC ACTIVITY

Cook Inlet is bordered on the west by the Aleutian Arc volcano chain, which extends westward to Kamchatka. Volcanic eruptions may limit oil spill response due to limited visibility, excessive ash in the air (respiratory safety concern), failure of rotating machinery due to abrasive nature of the ash fall, and potential electrostatic charges in the ash cloud. Ash may also behave as an electrical conductor and can short out equipment. To mitigate these response limitations, operations may be adjusted to avoid areas of active ashfall and responders will be outfitted with appropriate PPE. Adjustments to operations for all event classifications are outlined in section 3.11. A more detailed discussion of this condition is provided in the CISPRI *Technical Manual*, Appendix B.

3.4.7 SUMMARY OF LIMITING CONDITIONS

Table 3-3 provides a summary of conditions that may limit spill response activities. Also indicated are the percentages of time when these conditions may occur. A more detailed discussion of these conditions is provided in the CISPRI *Technical Manual*, Appendix B.

TABLE 3-3: SUMMARY OF POTENTIALLY LIMITING CONDITIONS FOR OIL SPILL RESPONSE

MONTH	DAYS WITH TEMPERATURES <32 °F[a]	DAYS % VISIBILITY <0.5 MILES[a]	DAYS % WIND SPEED 28-33 KNOTS[a]	DAYS % WIND SPEED 34-40 KNOTS[a]	DAYS % WIND SPEED >40 KNOTS[a]	DAYS % WAVE HEIGHT >6.0 FEET	HOURS OF DAYLIGHT[b]
January	30	2.8	1.5	1.0	0.5	3.1	6.8
February	28	2.4	1.0	0.5	<0.5	2.2	9.2
March	30	1.2	2.0	1.5	1.0	1.2	11.9
April	26	0.9	1.5	1.0	<0.5	0.1	14.7
May	10	0.3	<0.5	<0.5	<0.5	0.5	17.2
June	1	0.8	1.0	0.5	<0.5	0.0	18.8
July	0	0.9	0.5	<0.5	<0.5	0.1	18.1
August	1	1.0	0.5	<0.5	<0.5	0.2	15.8
September	7	1.1	0.5	<0.5	<0.5	0.9	12.7
October	20	0.7	0.5	<0.5	<0.5	2.0	10.4
November	28	1.5	1.0	0.5	<0.5	3.7	7.4
December	30	2.3	1.0	0.5	<0.5	2.1	6.0

Notes:

a. Conditions for Kenai.

b. Hours of daylight mid-month at 60° N latitude.

3.5 LOGISTICAL SUPPORT [18 AAC 75.425(e)(3)(E)]

3.5.1 GENERAL

For a major spill response effort, logistical support will center around marine and air activities, and heavy equipment use. Logistical support will be provided by CISPRI, as well as vessel and aircraft operators, as necessary. Trucking companies available in Alaska during an emergency oil spill response are in the CISPRI *Technical Manual* (CI-LP-3).

3.5.2 MARINE LOGISTICS

The CISPRI *Technical Manual* (CI-LP-4) gives lists of ports and anchorages in Cook Inlet, vessel specifications, and marine vessels and marine salvage companies available in Alaska for transportation during an emergency spill response.

3.5.3 AIR LOGISTICS

Air logistical support may be required to transport personnel and equipment to the staging area and/or the spill site. The CISPRI *Technical Manual* (CI-LP-3) lists both fixed-wing aircraft and helicopter specifications, airports in the Cook Inlet region, and aircraft available in Alaska for transportation during an emergency oil spill response.

3.5.4 INSPECTIONS

CISPRI has a rigorous inspection and maintenance program of their vessels and equipment. All CISPRI vessels meet USCG requirements.

3.6 RESPONSE EQUIPMENT [18 AAC 75.425(e)(3)(F)]

Contracted or other oil discharge containment, control, cleanup, storage, transfer, lightering, and related response equipment to meet the applicable response planning standard in Part 5, and to protect ESA and areas of public concern, is listed in the CISPRI *Technical Manual (*CI-LP-4). The location, inventory, and ownership of the equipment is listed in CISPRI *Technical Manual* (CI-LP-4). The timeframe for delivery and startup of response equipment and trained personnel located outside the facility's primary region of operation is discussed in Sections 1.5 and 1.6.

The majority of the equipment owned by CISPRI is located at CISPRI's Nikiski facility. However, CISPRI equipment stored and maintained at DRT is identified in Table 3-4. If this equipment was not available for use at DRT, additional resources would be called to the scene.

TABLE 3-4: ON-SITE SUPPORT EQUIPMENT OWNED BY CISPRI AND LOCATED AT DRT

TAG	DESCRIPTION	QUANTITY
CONX-2076	Conex, storage container, anchors/PPE	1
CONX-2127	Conex, storage container, boom	1
DCON-0057	Decon equip, personnel only, tote-0057	1
DCON-0095	Decon equip, personnel only	1
DRMC-0003	Drum, collection, 55 gal, SKMP-0015	1
BMIN-2136	Boom, inland 8 inch x 16 inch	1,000 feet
BMIN-2422	Boom, inland 8 inch x 16 inch	1,000 feet
PTEG-0004	Pump, trash, gas, Honda 3 inch, 5.5 HP	1
SKMP-0009	Rope, mop, MW-41, CS, 4 inch x 50 foot	1
SKMP-0015	Rope, mop, MW-41, CS	1

TABLE 3-4: ON-SITE SUPPORT EQUIPMENT OWNED BY CISPRI AND LOCATED AT DRT (CONTINUED)

TAG	DESCRIPTION	QUANTITY
SKVC-0004	Weir, Manta Ray, 48 inch	1
TKFT-2418	Fast tank, 63 bbl	1
TKFT-2421	Fast tank, 63 bbl	1
TKFT-2422	Fast tank, 63 bbl	1
TKFT-2425	Fast tank, 63 bbl	1
TKFT-2426	Fast tank, 63 bbl	1
TOTE-0008	Tote, decon	1
TOTE-0057	Tote, decon	1
WPT-0003	Weather port, 10 foot x 15 foot	1

In addition, CIPL has dedicated oil spill response equipment positioned in conexes and storage areas at the DRT and Christy Lee Platform. Table 3-5 identifies the on-site support equipment located at DRT. Table 3-6 identifies on-site support equipment located on the Christy Lee Platform. Nameplate capacities, specifications, condition, storage locations, and mobilization times are also listed in the tables. Table 3-7 identifies pollution control materials commercially available. Pollution control materials would be either flown or barged to the facility.

Two boats are located at the DRT. A rigid hull inflatable boat with a 70 horsepower (HP) motor and a flat-bottom boat with jet outboard motor are located in the hangar during the open water season.

Numerous pumps are kept at DRT. Both discharge and suction hoses available at the terminal are adaptable to the pumps by changing fittings that are kept in the welding shop.

Support equipment is stored in the hangar. The equipment is categorically segregated for efficient access and retrieval. A vehicle can be backed into the hangar and loaded with the appropriate equipment. This allows for expedient retrieval, even in adverse weather conditions.

Spill response equipment owned by CISPRI is maintained and inspected by CISPRI.

TABLE 3-5: ON-SITE SUPPORT EQUIPMENT OWNED BY CIPL AND LOCATED AT DRT

QUANTITY	CONDITION	EQUIPMENT	DESCRIPTION/ NAMEPLATE CAPACITY	STORAGE LOCATION	MOBILIZATION TIME
Collecting Agents and Sorbents					
100	New	Sorbent Pillows	8 inch x 18 inch	Hangar	< 1 hr
27	New	Sorbent Pads Ergon E-200	18 inch x 18 inch x 3/16 inch	Hangar	< 1 hr
500 foot	New	Sorbent Boom Ergon E-810	8 inch x 10 foot	Hangar	< 1 hr
1,500	New	Absorbent Pom Poms	--	Hangar	< 1 hr
190 bags	New	Snare Boom/Pom Pom Boom	100 foot each	Old Oil Recovery Tank	< 1 hr
28 rolls	New	Geo bags	50 foot/roll	Hangar	< 1 hr
1 roll	New	Visqueen	--	Hangar	< 1 hr
177 rolls	New	Absorbents	--	Hangar	< 1 hr
Pumps and Related Equipment					
1	Good	Centrifugal Pump	4 inch, ACME, Diesel, 640 gpm @ 70 foot head	Hangar - upstairs	< 1 hr
1	Good	Centrifugal Pump	4 inch, Gorman Rupp, 724 gpm @ 5 foot lift @ 30 foot head	Hangar - upstairs	< 1 hr
2	Good	Centrifugal Pump	3 inch, Multiquip, Diesel, 400 gpm @ 20 foot head	Hangar - upstairs	< 1 hr
2	Good	Centrifugal Pump	2 inch Honda 5 HP, Gas	White Building	< 1 hr
1	Good	Diaphragm Air Pump	2 inch ITT Marlow	White Building	< 1 hr
5	Good	Centrifugal Pump	4 inch Honda 8 HP Gas	White Building	< 1 hr
1	Good	Diaphragm Air Pump	3 inch Sandpiper	White Building	< 1 hr
2	Good	Diaphragm Air Pump	1 inch Sandpiper	White Building	< 1 hr
1	Good	Piston Pump, High Pressure	3 inch Gasco, 2.5 x 5 x 8 inch	White Building	< 1 hr
1	Good	2-inch Discharge Hose	500 foot	White Building	< 1 hr
1	Good	3-inch Discharge Hose	150 foot	White Building	< 1 hr
1	Good	4-inch Discharge Hose	500 foot	White Building	< 1 hr

TABLE 3-5: ON-SITE SUPPORT EQUIPMENT OWNED BY CIPL AND LOCATED AT DRT

QUANTITY	CONDITION	EQUIPMENT	DESCRIPTION/ NAMEPLATE CAPACITY	STORAGE LOCATION	MOBILIZATION TIME
Pumps and Related Equipment *(Continued)*					
1	Good	6-inch Discharge Hose	1,000 foot	Ballast Dike	< 1 hr
1	Good	3-inch Suction Hose	80 foot	White Building	< 1 hr
1	Good	4-inch Suction Hose	80 foot	White Building	< 1 hr
1	Good	6-inch Suction Hose	60 foot total. 40 feet inside Tank 7 and 20 feet inside ballast dike	Tank 7 and Ballast Dike	< 1 hr
Generators					
2	Good	Generator	3500 Honda	White Building	< 1 hr
3	Good	Generator	1000 Honda	White Building	< 1 hr
1	Good	Generator	7500 Honda	Hangar	< 1 hr
1	Good	Caterpillar	Trailer-Mounted	Warehouse	< 1 hr
Welders					
1	Good	Welder	Lincoln Invartec V350-Pro	Welding Shop	< 1 hr
1	Good	Welder	Lincoln 200 Welder with Dentz, 2 cylinder diesel-powered engine	Tank 7	< 1 hr
1	Good	Welder	Lincoln 225 G7 with Conan gas engine, portable, 2 cylinder	Welding Shop	< 1 hr
Loading/Earth Moving Equipment/Miscellaneous					
1	Good	Front-end Loader	Front-end Loader IT62	Equipment Shed	< 1 hr
1	Good	Dozer	Caterpillar D-6M	Equipment Shed	< 1 hr
1	Good	Mack Dump Truck	12 YD	Equipment Shed	< 1 hr
1	Good	Dozer	Caterpillar D-4H	Equipment Shed	< 1 hr
1	Good	Grader	Caterpillar 140-H	Equipment Shed	< 1 hr
1	Good	Front-end Loader	Caterpillar 950	Equipment Shed	< 1 hr
1	Good	Front-end Loader/Skidsteer	743 DS Bobcat	Welding Shop	< 1 hr

TABLE 3-5: ON-SITE SUPPORT EQUIPMENT OWNED BY CIPL AND LOCATED AT DRT

QUANTITY	CONDITION	EQUIPMENT	DESCRIPTION/ NAMEPLATE CAPACITY	STORAGE LOCATION	MOBILIZATION TIME
Loading/Earth Moving Equipment/Miscellaneous *(Continued)*					
3	Good	Four Wheelers	Honda TRX300	Hangar	< 1 hr
5	Good	Snowmobiles	Skidoo	Hangar	< 1 hr
2	Good	Light Tower	Maxi 4 Light Model ML111 CEMAS #92-096	Tank 7	< 1 hr
Firefighting Equipment					
1	Good	Truck	1967 Ford Fire Boss	Safety Building	< 1 hr
33	Good	R Purple K	Spare Pails	Safety Building	< 1 hr
Communicators					
13	Good	Radios	Portable Hand-held	Industrial Building	< 1 hr
Transportation					
1	Good	Boat with 70 HP motor	Rigid Hull Inflatable	Tank 7	< 1 hr
1	Good	Flat Bottom Boat	Lund	Tank 7	< 1 hr
Miscellaneous					
1	Good	Trailer-Mounted Tank	300 gal	Warehouse C	< 1 hr
1	Good	Skid-Mounted Tank	500 gal	Warehouse C	< 1 hr
1	Good	Tank	#3	Tank Farm	< 1 hr
Lot	Good	Hand tools, shovels, ropes, anchors, life vests, hardhats, disposable coveralls (Tyvek®), gloves, etc.	--	Hangar-"I" Building Welding Shop	< 1 hr
1	Good	Liquid Vacuum System	Vacuum trailer with vacuum system	Warehouse C	< 1 hr

Note: While equipment located at the DRT (listed both on the previous page and the equipment list below) would be utilized by terminal personnel, CISPRI would be contacted to supply additional equipment as needed.

CISPRI's equipment is listed in the CISPRI Technical Manual (CI-LP-4 and Appendix A).

TABLE 3-6: EQUIPMENT OWNED BY COOK INLET PIPE LINE AND LOCATED ON CHRISTY LEE PLATFORM

QUANTITY	CONDITION	EQUIPMENT	DESCRIPTION/ NAMEPLATE CAPACITY	STORAGE LOCATION	MOBILIZATION TIME
Firefighting					
3	Good	Fire Extinguishers	350 pound dry powder, wheel mounted	Platform	< 1 hr
15	Good	Fire Extinguishers	30 pound dry powder	Platform	< 1 hr
6	Good	Hose reels and nozzles	3 inch canvas	Platform	< 1 hr
2	Good	Fire axes	--	Platform	< 1 hr
Collecting Agents and Sorbents					
20	New	Sorbent rolls, Ergon 150	36 inch x 150 foot x 3/8 inch	Platform	< 1 hr
10	New	Sorbent pad packs, Ergon 100	18 inch x 18 inch x 3/8 inch	Platform	< 1 hr

TABLE 3-7: POLLUTION CONTROL MATERIALS COMMERCIALLY AVAILABLE

	SOURCE	TELEPHONE
Collection Agents		
Sorbent Materials	Unitech of Alaska 7600 King St Anchorage, AK 99518	(907) 349-5142
Sawdust	Valley Sawmill 10660 Cordova St Anchorage, AK 99515	(907) 563-3436
Sinking Agents		
Cement	Alaska Basic Industries (ABI) 1300 Ocean Dock Rd Anchorage, AK 99515	(907) 277-7023
Sand	Anchorage Sand and Gravel 1040 O'Malley Rd Anchorage, AK 99515	(907) 349-3333
Emulsifying or Soluble Agents (by permit only)		
Polycomplex A-11	Unisource 1930 Spar Ave Anchorage, AK 99501	(907) 278-7127
Detergents (dry)	Unisource 1930 Spar Ave Anchorage, AK 99501	(907) 278-7127
Sand	Unisource 1930 Spar Ave Anchorage, AK 99501	(907) 278-7127
Skimmers		
Multipurpose, Weir, Disc, Manta Ray, Scavengal	Unitech of Alaska 7600 King St Anchorage, AK 99518	(907) 349-5142
Containment Boom (Various types)	Unitech of Alaska 7600 King St Anchorage, AK 99518	(907) 349-5142
Fire Containment Boom[a]	CISPRI	(907) 776-5129 (907) 561-5111
Helitorch[a]		
	CISPRI	(907) 776-5129 (907) 561-5111

Note:

a. Burn permit is required from ADEC.

3.7 NON-MECHANICAL RESPONSE [18 AAC 75.425(e)(3)(G)]

Non-mechanical response is discussed in the CISPRI *Technical Manual* (CI-NM 3 through 5) and Section 1.7.

3.8 RESPONSE ACTION CONTRACTOR INFORMATION [18 AAC 75.425(e)(3)(H)]

The CIPL oil spill response contractor is CISPRI. The address and telephone number for CISPRI is provided in the introduction of the CISPRI *Technical Manual*. CISPRI has a number of additional contracts in place with other companies to respond to a spill. The CISPRI *Technical Manual* (CI-LP-3) provides additional information on these contractors. Copies of these contracts are available upon request. CIPL's statement of contractual terms with CISPRI is provided in the Introduction of this ODPCP.

3.9 TRAINING AND DRILLS [18 AAC 75.425(e)(3)(I)]

3.9.1 GENERAL

The IRT receives training through CISPRI, as well as participates in CISPRI drills within Cook Inlet. The IRT usually consists of 10 to 12 field personnel from different CIPL facilities. Personnel are trained, at a minimum with 40-hour HAZWOPER training, routinely participate in CISPRI drills, and are trained in boom and skimmer operations. Hazardous Material (HAZMAT) personnel are rapidly mobilized from their job sites via helicopter to participate in immediate spill response actions. Drills are performed at least once per year, and employees assigned to the IRT mobilize to the designated command center to practice spill response scenarios. Table 3-8 presents Facility Supervisors and the number of response trained personnel (RTP) at each facility.

TABLE 3-8: NUMBER OF TRAINED CIPL PERSONNEL

FACILITY	RTP[a]	CONTACTS	WORK	CELLULAR
DRT	16	Lead Operator	(907) 776-6800 ext 103	(907) 398-4005
TBPF	23	Lead Operator	(907) 776-6850	
GPTF	4	Lead Operator	(907) 776-6610	

Note:

a. Response trained personnel (8-hour minimum, HAZMAT Technician/Specialist and 40-hour HAZWOPER).

3.9.2 OSHA REQUIREMENTS

The Occupational Safety and Health Administration (OSHA) requirements are based on HAZWOPER regulations published in 29 CFR 1910.120. Alaska Department of Occupational Safety and Health regulations are similar to the federal regulations. Enforcement of OSHA regulations is expected to occur primarily at the state level. Details of OSHA training are discussed in the CISPRI *Technical Manual*, Appendix E.

3.9.3 SPILL DRILLS AND TRAINING

CIPL follows the USCG NPREP Drill Cycle, which is a 3-year drill cycle. Drill documentation will be maintained for a minimum of 3 years.

3.9.4 SPILL RESPONSE TRAINING

HAK provides annual classroom training and tabletop exercises for those employees participating on the ICS team. Tabletop drills are coordinated with ADEC, the USCG, and other regulatory agencies and non-government organizations.

3.9.5 CISPRI TRAINING PROGRAMS

The CISPRI training program is primarily designed to provide CISPRI personnel and member companies the essential training necessary to respond to oil spills in the Cook Inlet area. The CISPRI *Technical Manual*, Appendix E, describes the training that is provided.

3.9.6 TRAINING RECORDS

CIPL training records are maintained at the Anchorage office. Training records for response personnel are maintained for as long as the individual is a designated response person and a minimum period of 5 years.

The CISPRI training records are maintained in their main office at Nikiski. CISPRI records include training documentation for all CISPRI response personnel and contractor response personnel.

Records of drills and actual spill response actions are maintained in the CIPL Anchorage office for a period of at least 3 years.

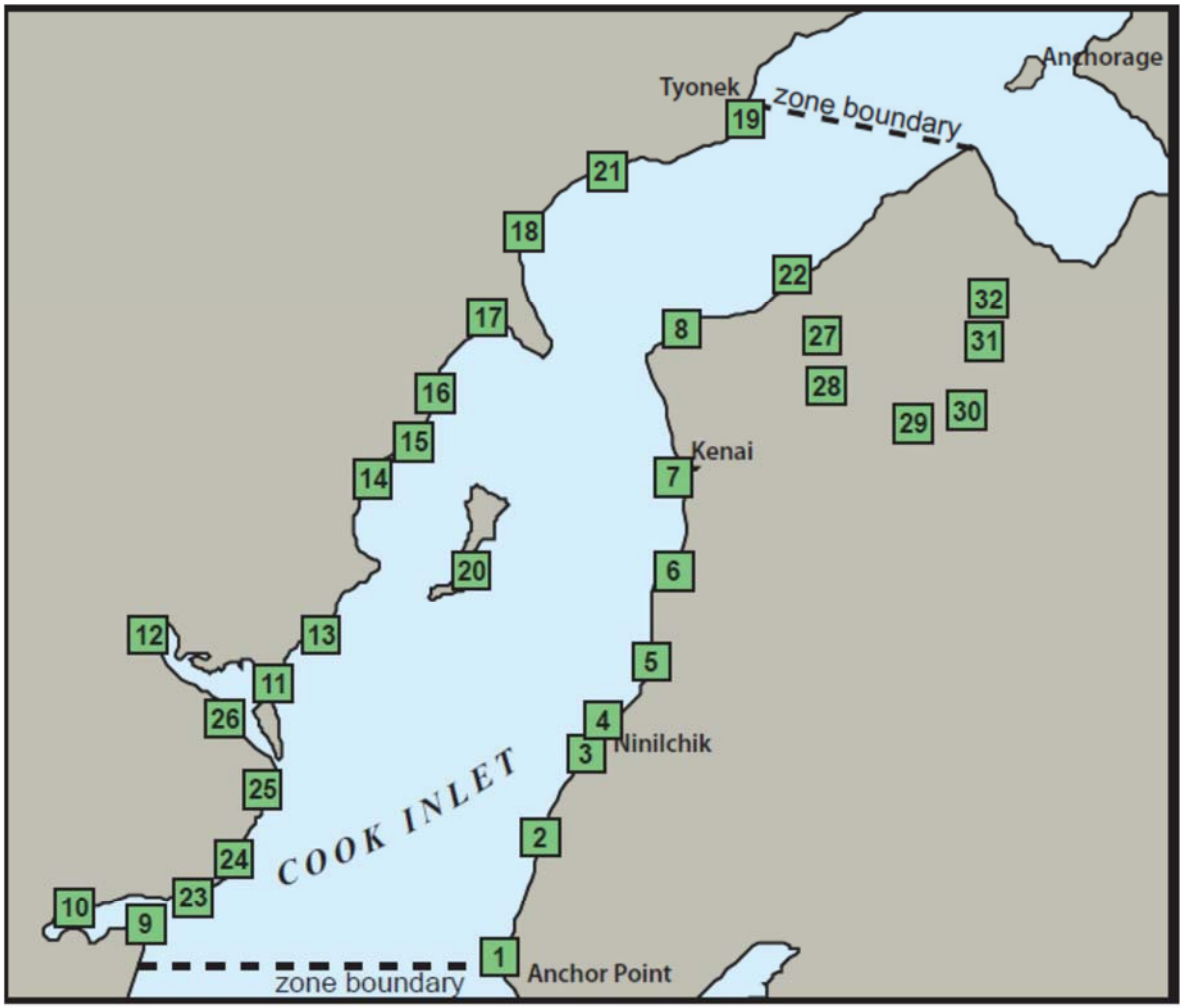
3.10 PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS [18 AAC 75.425(e)(3)(J)]

CIPL uses guidelines outlined in the CISPRI *Technical Manual* (CI-SA-1) and the Cook Inlet Subarea Contingency Plan to identify and prioritize spill response activities in ESAs. If prioritization of locations is required, the UC will consult with current data on ESAs and areas of public concern for the area of response.

The Cook Inlet Subarea Contingency Plan provides a complete list and numerous maps of ESAs in the Cook Inlet region. The Cook Inlet GRS outline specific response strategies for a number of high priority sites. Section 3.2, Receiving Environment, discusses ESAs that could be impacted by spills. These include the Trading Bay State Game Refuge and the Redoubt Bay Critical Habitat Area.

Archaeological and historical sites have been reported in the Cook Inlet region. Caution should be used in any cleanup operation so as not to disturb or impact any historical or archaeological sites during response. These areas are outlined in Figure 3-1.

FIGURE 3-1: SENSITIVE AREAS WITH GRS IN CENTRAL COOK INLET



Central Cook Inlet, ALASKA *version: June 27, 2011*

SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

CCI-01 – Anchor River
CCI-02 – Stariski Creek
CCI-03 – Deep Creek
CCI-04 – Ninilchik River
CCI-05 – Clam Gulch
CCI-06 – Kasilof River
CCI-07 – Kenai River
CCI-08 – East Foreland
CCI-09 – Gull Island
CCI-10 – West Glacier Creek
CCI-11 – Crescent River
CCI-12 – Tuxedni River
CCI-13 – Polly Creek
CCI-14 – Little Jack Slough
CCI-15 – Drift River
CCI-16 – Big River
CCI-17 – Kustatan River
CCI-18 – McArthur River
CCI-19 – Chuitna River
CCI-20 – Swamp Creek
CCI-21 – Middle River
CCI-22 – Swanson River
CCI-23 – Shelter Creek
CCI-24 – Silver Salmon Creek
CCI-25 – Johnson River
CCI-26 – Tuxedni Bay
CCI-27 – Swanson R Mile 1.5
CCI-28 – Swanson R Mile 6.8
CCI-29 – Swanson R Mile 18.5
CCI-30 – Swanson R Mile 19.2
CCI-31 – Swanson R Mile 21.85
CCI-32 – Swanson R Mile 22.7

Map obtained from http://www.dec.state.ak.us/spar/perp/grs/ci/cic/home.htm on December 28, 2011.

3.11 ADDITIONAL INFORMATION [18 AAC 75.425(e)(3)(K)]

3.11.1 MT. REDOUBT PREVENTION RESPONSE STRATEGIES

Volcanic activity is addressed in Section 2.4.1 to address response strategies engaged by CIPL in the event of a volcanic eruption.

Reestablishment of DRT site flood control protection integrity is accomplished through modifications of the existing proven flood control berm system. Design basis will take into account current site conditions and anticipated flood/debris loads as a result of volcanic activity. Respective flood protection enhancement is accomplished by sufficiently increasing the design height of the existing flood control berms through addition of site materials and installation of sheet pile. Design is based on the Corps of Engineers guidance, which includes post-Katrina levee failure lessons learned.

3.11.2 VOLCANO ALERT INFORMATION

PREPARATIONS FOR VOLCANIC ACTIVITY

Due to the DRT's location near the base of Mt. Redoubt, CIPL remains prepared for a potential eruption at the facility. CIPL is prepared for facility personnel to respond to volcano-related events in a timely manner to maintain the environment and the safety and security of personnel and structures.

Continuous monitoring of volcanic activity in the area is maintained by the Alaska Volcano Observatory and is available online at www.avo.alaska.edu/. CIPL personnel are able to access the level of current volcanic activity utilizing online reporting and web cams.

A Safe Haven is located on high ground at DRT that would allow personnel to remain on site if an eruption escalated quickly or if facility evacuation was not possible. The Safe Haven is maintained with ample communications equipment, food, water, and sleeping quarters to maintain essential facility personnel during a volcanic event or if facility flooding occurs.

In some circumstances, conditions may dictate evacuation of the facility. Personnel will be transferred to TBPF until it is safe to return.

The Alaska Volcano Observatory classifies Mt. Redoubt into one of four color-coded conditions: green, yellow, orange, or red. For each classification, a pre-determined set of protocols are in place to ensure a coordinated response. These protocols are described below.

Green – Normal Conditions

No eruption is anticipated in a green state. The volcano is in a quiet or dormant state. During this time, CIPL will conduct normal operations at DRT.

Yellow – Advisory State

In a yellow state, an eruption is possible in the next few weeks and may occur with little or no additional warning.

In a yellow state, CIPL will initiate the following protocols:

- The on-site supervisor reviews station shutdown procedures with the crew.
- A test of the satellite phones and a review of usage is conducted with the crew.
- The crew ensures that the fax machine is operational.
- An inventory of emergency equipment is conducted.
- Shippers and Alaska maritime agencies are kept informed.
- The extra fuel tank located at the Safe Haven is filled and tested.
- The crew will prepare the Safe Haven for use.
- Remote operations from the TBPF will be set up and tested.
- Procedures for tight-line operations are initiated.
    - Isolate the tanks in use.
    - Product is pumped directly from GPTF and TBPF to Christy Lee for vessel loading process.
    - A vessel is scheduled within 24 hours for lifting of crude oil from Drift River Terminal.
- Non-essential personnel depart the facility.

In a yellow state, the CIPL Incident Management Team (IMT) instates the following protocols:

- A UC is assembled, comprised of the CIPL IC, USCG FOSC and ADEC SOSC, and will meet to discuss the path forward for action.
- The UC will continue to meet as needed to manage issues that surface.
- The CIPL ICS team will receive updates via email as necessary and be advised of the steps necessary for a possible response.
- CIPL will keep media, agencies, and partners informed as new information becomes available.

Orange – Watch

During the orange or watch stage, an eruption is possible within a few days and may occur with little or no warning.

In an orange state, CIPL institutes the following protocols:

- The on-site supervisor reviews station shutdown procedures with crew.
- Personnel on Location list is emailed to the CIPL Superintendent each morning.
- All aviation companies are notified of orange warning.

- All heavy equipment and vehicles not in use are moved to high ground or inside the ballast tank dike area.
- The extra fuel tank located at the Safe Haven is filled and tested.
- The crew will prepare the Safe Haven for use.
- Remote operations from the TBPF will be set up and tested.
- The crew will ensure that remote cameras are functioning.
- The on-site supervisor will initiate shelter in place or the evacuation process and conduct a muster roll call.

In an orange state, the CIPL IMT institutes the following protocols:

- The UC (IC, FOSC, and SOSC) continues to meet to discuss the path forward for action.
- The level of ICS activation is reviewed.
- The CIPL ICS team will receive updates via email as necessary and be advised of the steps necessary for a possible response.
- A command center is established at JL Properties (primary) or other location as appropriate.
- CIPL keeps media, agencies, and partners informed as new information becomes available.

Red – Warning

During a red state, an eruption is expected within 24 hours.

In a red state, CIPL instates the following protocols:

- Aviation companies will be notified for intent to evacuate.
  - Era dispatch: 907-776-6748
  - Rediske Air: 907-776-8985
  - Kenai Aviation: 907-283-4124
  - Maritime Helicopters: 907-235-7771
  - Grant Aviation: 907-242-3018, 907-394-2964
- Evacuation by helicopter is initiated.
- The pipeline is isolated at the DRT Pig Trap with valves ML 8 and ML 9, with main line relief into Tank 3.
- Pipeline pressure is monitored. If needed, either ML 8 or ML 9 are opened to adjust the backpressure valve set point, bleeding pressure off into facility piping.

In the event that condition red exists and evacuation is not possible, the steps below are implemented:

- Control, command, and facility personnel move to the Safe Haven.
- Teams are established to monitor surrounding conditions.
- A Field Emergency Management Team is established and works with CIPL ICS to implement the Incident Action Plan.

- The crew continues to evaluate the possibility to evacuate.

In a red state, CIPL IMT instates the following protocols:

- The UC (IC, FOSC, and SOSC) activates a response in the command center.
- The CIPL ICS team is activated and assembles for response.
- CIPL ICS Operations Section interfaces with on-site Field Emergency Management Team.
- CIPL keeps media, agencies, and partners informed as new information becomes available.

If oil resides in the tanks during a volcanic eruption, the UC will determine when and if production facilities are shut in. The UC will also determine if and when stored oil needs to be removed from the facility.

When volcanic activity concludes, CIPL, with UC concurrence, will assess conditions and return to normal activity. During the interim cleanup and assessment, CIPL may utilize tight-lining to get hydrocarbons to market.

3.12 BIBLIOGRAPHY [18 AAC 75.425(e)(3)(L)

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PART 4. BEST AVAILABLE TECHNOLOGY REVIEW [18 AAC 75.425 (e)]

Applicable technologies associated with CIPL operations, which are believed to be appropriate for inclusion in the Best Available Technology (BAT) Review, include:

- Communications systems [18 AAC 75.425(e)(1)(D)]
- Source control procedures [18 AAC 75.425(e)(1)(F)(i)]
- Trajectory analysis on open water [18 AAC 75.425(e)(1)(F)(iv)]
- Wildlife capture, treatment, and release programs [18 AAC 75.425(e)(1)(F)(xi)]
- Liquid level determinations for oil storage tanks [18 AAC 75.065(k)]
- Maintenance for existing buried steel piping [18 AAC 75.080(b)]
- Corrosion surveys for existing buried steel piping [18 AAC 75.080(k)(2)]
- Leak detection for crude oil pipelines [18 AAC 75.055(a)]

Each topic with respect to BAT is addressed in the following sections.

4.1 COMMUNICATIONS [18 AAC 75.425(e)(4)(A)(i)]

CIPL maintains an intensive communications system, which provides both reliability and redundancy. Key components of the system include:

1. Telephone/hand-held radios/microwave system connecting all major facilities.
2. Dedicated operations VHF system connecting major facilities and accessible by portable radios, and a dedicated helicopter.
3. Marine VHF radio system providing communication between the DRT and offshore loading platform, tankers/response vessels, and dedicated helicopters.
4. Aviation VHF radio system providing communication between DRT and aircraft.
5. Integrated SCADA system that has continuous information on all major facility operations.

This system is considered to be the best available and appropriate technology for this type of operation.

4.2 SOURCE CONTROL [18 AAC 75.425(e)(4)(A)(i)]

Separate BAT analysis for source control to meet the requirements of 18 AAC 75.425(e)(1)(F)(i) is provided for the following components of the DRT.

4.2.1 MAJOR ONSHORE OIL STORAGE TANKS

Source control systems for major onshore oil storage tanks evaluated included:

1. Leak patching materials/systems.
2. Piping and valve systems to allow transfer of oil to another tank.
3. Impermeable secondary containment liner/drainage control.
4. Liners beneath tanks.

CIPL maintains a stock of timber and steel materials on site that could be used as temporary patches for minor leaks. As such, this approach for source control is currently available for use at the facility.

Major crude oil tanks at the DRT (Tanks 1, 2, 3, and 4) are all connected through a manifold and pumping system, and all major onshore tanks currently have automatic high-high liquid-level shutdown switches. Oil from a leaking tank would initially be allowed to gravity feed to an empty or near-empty tank; gravity feed transfers are estimated to occur at a rate of approximately 30,000 barrels per hour (BPH). Once the tanks are nearly equalized, the existing transfer pumps would be used to transfer any remaining oil from the damaged tank; the transfer rate for the existing pumps is approximately 20,000 BPH.

Active large crude oil tanks currently have lined secondary containment areas. Liners installed/pending to be installed abut the tanks but do not extend beneath the tanks. The option of extending impermeable liners/barriers beneath the tanks is evaluated in Table 4-1.

TABLE 4-1: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR MAJOR ONSHORE OIL STORAGE TANKS

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	TANK TRANSFER SYSTEMS ON MAJOR TANKS	LINED SECONDARY CONTAINMENT	LINER BENEATH TANKS
Availability	CIPL maintains a stock of wood and steel on site that could be used to plug small leaks and cracks in the tanks.	This technology is available and currently used at the facility.	This technology is available and currently used at the facility.	Technology is available for this type of operation.
Transferability	Transferable and currently available at the facility.	Transferable and currently used at the facility.	Transferable and currently used at the facility.	Technology is directly transferable in most cases.
Effectiveness	The system is generally effective at stopping flow from the sides of tanks but cannot be used to plug leaks in the tank bottom.	This system would be effective for controlling the source of a small leak but would not be effective for a major tank rupture.	The system is generally effective at stopping flow at the surface but not subsurface.	This technology could be effective in preventing discharges to both the surface and subsurface.

TABLE 4-1: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR MAJOR ONSHORE OIL STORAGE TANKS (CONTINUED)

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	TANK TRANSFER SYSTEMS ON MAJOR TANKS	LINED SECONDARY CONTAINMENT	LINER BENEATH TANKS
Cost	There is essentially no cost associated with the use of this alternative.	Systems currently are in place for the crude oil and diesel tanks.	Liner installation costs approximately $500,000 to $1,000,000 per major tank (based on actual costs for 2000 construction efforts).	To install a liner beneath the tanks would require moving the tanks and would probably cost in excess of $1,000,000 per tank.
Age and Condition	Plugging and patching materials would generally be in good condition.	Systems currently in use include components from the initial facility construction, but they are in good condition.	Liners at Tanks 3 and 4 were new in 2000. 2001 construction efforts also used new liner material.	Liners/other impermeable materials would be new at the time of installation.
Compatibility	The technology is currently available on site and is compatible.	The technology is currently available on site and is compatible.	The technology is currently available and is compatible.	Installation would cause significant disruptions to current operations while tanks were taken out of service, moved, and replaced.
Feasibility	This approach is in use and feasible.	This approach is in use and feasible.	This approach is in use and feasible.	The use of this technology is not considered feasible for economic reasons.
Environmental Impacts	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill, especially to the subsurface.
Applicability to CIPL Operations	Currently in use at the facility.	Currently in place on major onshore tanks.	Installed on major onshore tanks.	Not considered at the facility because of cost, compatibility, and feasibility.

4.2.2 MAJOR OFFSHORE OIL STORAGE TANK

The only major offshore oil storage tank is Tank CL-4, an 805-bbl diesel storage tank on the Christy Lee Platform. The tank is integral to the offshore platform and does not have secondary containment. Source control systems evaluated included:

1. Use of available leak-patching materials/systems.
2. Arranging piping and valves to permit rapid transfer of diesel from the tank.
3. Automatic high-high liquid-level shutdown switches.
4. Installation of secondary containment.

Table 4-2 provides a comparison of these technologies.

TABLE 4-2: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR MAJOR OFFSHORE OIL STORAGE TANKS

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	ESTABLISHED TRANSFER PROCEDURES	SECONDARY CONTAINMENT	AUTOMATIC HIGH-HIGH LEVEL SHUTDOWN
Availability	CIPL maintains a stock of wood and steel on site that could be used to plug small leaks and cracks in the tank.	Available; procedures are in place to empty the tank should a leak occur.	Technology is available to construct an outer shell beneath the tank.	This technology is readily available for use at the facility.
Transferability	Transferable and currently available at the facility.	This option is in place and transferable.	Technology is directly transferable to construct a secondary containment beneath the tank.	This technology is directly transferable to the facility as it is currently used elsewhere at the facility.
Effectiveness	The system is generally effective at stopping flow from the sides of tanks but cannot be used to plug leaks in the tank bottom.	Transfer of fuel from the tank could reduce the total volume spilled. For a major tank rupture, it would likely not be effective.	This technology could be effective in preventing discharges to the water.	The tank is normally filled only once per year and strict procedures are used to prevent overfilling. Additional instrumentation would not add to effectiveness of the system.
Cost	There is essentially no cost associated with the use of this alternative.	No cost; this technology is in place at the facility.	To install a secondary containment system beneath the tank would require a cost in excess of $1,000K.	It is estimated that the system could be installed for about $4-5K.

TABLE 4-2: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR MAJOR OFFSHORE OIL STORAGE TANKS (CONTINUED)

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	ESTABLISHED TRANSFER PROCEDURES	SECONDARY CONTAINMENT	AUTOMATIC HIGH-HIGH LEVEL SHUTDOWN
Age and Condition	Plugging and patching materials would generally be in good condition.	Procedures put in place in 2000.	The containment system would likely be constructed of steel and would be new at the time of installation.	Any system installed would be in good condition (most likely new).
Compatibility	The technology is currently available on site and is compatible.	In place and compatible.	Installation of a system would require consider-able engineering and actual construction would disrupt operations at the loading facility.	As the tank is normally filled only once per year and fuel is normally well below the tank capacity, this system would be redundant and possibly add controls that are not required.
Feasibility	This approach is in use and feasible.	Feasible, in place since 2000.	The use of this technology is not considered feasible for economic and compatibility issues.	The approach is considered to be entirely feasible.
Environmental Impacts	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	The system would likely result in some environmental benefits for small leaks but would not be effective for a major rupture of the tank.	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill on the water surface.	Given the current operations using the tank, there would be no added environmental benefit to adding the equipment.
Applicability to CIPL Operations	Currently in use at the facility.	Currently in use at the facility.	Not considered at the facility because of cost, compatibility, and feasibility.	Not considered at the facility because of effectiveness, cost, and compatibility.

CIPL maintains a stock of timber and steel materials and pipe clamps/split sleeves of varying sizes on site that could be used as temporary patches for minor leaks. As such, this approach for source control is currently available for use at the facility.

Transfer procedures have been established to rapidly transfer fuel from Tank CL-4 in the event of a leak. In the event of a leak in the main diesel tank, a hose would be dropped into the top of the diesel tank (through an existing inspection/access port) and the discharge hose connected to the 30-inch loading line through existing connection ports. A 3-inch pump (rated capacity of approximately 400 gpm) is onboard the loading platform. It is estimated that the entire tank could be pumped in approximately 1.5 to 2 hours.

Tank CL-4 was constructed integral to the platform structure and does not have any form of secondary containment on its outside walls. Installation of secondary containment would in essence include

construction of an outside wall over the exposed outer walls of the tank. This option is evaluated in Table 4-3.

4.2.3 CRUDE OIL TRANSMISSION PIPELINES

CIPL has approximately 41.5 miles of buried 20-inch crude oil pipeline (mainline) between the GPTF and DRT, and 2.5 miles of buried 12-inch crude oil pipeline between the WFPS and the mainline. Source control systems evaluated for these crude oil transmission pipelines included:

1. Leak patching materials/systems.
2. Placement of manual/motor operated block valves and check valves at strategic locations along the pipelines.
3. Installation of double-walled piping at major river crossings.

CIPL maintains a stock of timber and steel materials on site that could be used as temporary patches for minor leaks. As such, this approach for source control is currently available for use at the facility.

CIPL has manual/motor-operated block valves and check valves installed at major river crossings. The placements of these valves were intended specifically to minimize the amount of oil that could reach open water in the event of a major pipeline rupture.

One additional option that was considered but not installed in the CIPL system would include replacing the existing pipe with double-walled piping at locations where the pipeline is most susceptible to damage (i.e., at the river crossings). Based on the evaluation as presented in Table 4-3, this option is not believed to be viable. Most of the existing major CIPL crossings have instead been replaced with placement of heavy-walled pipe through augured holes rather than in traditional trenches across the river channel.

TABLE 4-3: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR ONSHORE PIPELINES

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	STRATEGIC BLOCK AND CHECK VALVES	DOUBLE-WALLED PIPE AT RIVER CROSSINGS
Availability	CIPL maintains a stock of wood and steel on site that could be used to plug small leaks and cracks in the pipelines.	This technology is available and currently used at the facility.	This technology is considered to generally be available.
Transferability	Transferable and currently available at the facility.	Transferable and currently used at the facility.	The proposed approach is transferable for the pipelines.
Effectiveness	The system is generally effective at stopping flow from small leaks but not a major rupture.	This system can be quite effective at minimizing the amount of oil reaching open water.	Events sufficient to result in failure of a single-walled pipeline would also likely be sufficient to cause failure of a double-walled pipeline. Double-walled pipes could also be prone to increased corrosion.

TABLE 4-3: BAT REVIEW FOR SOURCE CONTROL PROCEDURES FOR ONSHORE PIPELINES (CONTINUED)

BAT EVALUATION CRITERIA	AVAILABLE PATCHING MATERIALS	STRATEGIC BLOCK AND CHECK VALVES	DOUBLE-WALLED PIPE AT RIVER CROSSINGS
Cost	There is essentially no cost associated with the use of this alternative.	There are minor costs associated with maintenance of the existing systems that are currently in place.	Pipelines at the river crossings would need to be completely replaced. It is estimated that it would cost about $1.5M per crossing for pipeline replacement.
Age and Condition	Plugging and patching materials would generally be in good condition.	The existing valves are estimated to be about 20 to 30 years old but are well maintained and in good condition.	Double-walled piping would use new materials.
Compatibility	The technology is currently available on site and is compatible.	The technology is available and compatible.	Installation of the double-walled pipe would cause disruption of current pipeline operations.
Feasibility	This approach is being used and feasible.	This approach is being used and feasible.	This approach is not considered to be feasible for economic, effectiveness, and compatibility issues.
Environmental Impacts	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	Implementing the action should provide environmental benefits as it might reduce potential effects from a spill.	Implementing the action might provide environmental benefits as it might reduce potential effects from a spill.
Applicability to CIPL Operations	Currently in use at the facility.	Currently installed at strategic locations on the pipeline.	Not considered at the facility because of effectiveness, cost, compatibility, and feasibility.

4.3 TRAJECTORY ANALYSIS [18 AAC 75.425(e)(4)(A)(i)]

Trajectory analyses, surveillance, and forecasting are described in the CISPRI *Technical Manual* (CI-TS-1 through CI-TS-4) and are incorporated by reference.

4.4 WILDLIFE CAPTURE, TREATMENT, AND RELEASE PROGRAMS [18 AAC 75.425(e)(4)(A)(i)]

The wildlife protection plan referenced in Section 1.6.6 can be considered BAT because it is based on guidelines published by the wildlife trustee agencies and involves the use of the CISPRI stabilization center. CISPRI designed this center in consultation with recognized experts in the field, including the IBR.

CISPRI worked with government agencies to develop the wildlife protection strategy. As a starting point, the task force used the Wildlife Protection Guidelines for Alaska in the Alaska Region Oil and Hazardous Substances Pollution Contingency Plan produced by the ARRT. These guidelines identify the three-tier strategy in the CISPRI plan. The tertiary strategy is the handling of oiled animals. The CISPRI wildlife capture and stabilization center was designed for this purpose and considered the input of Dr. Jan White, DVM, the Operations Manager of the IBR.

The design for the CISPRI stabilization center is similar to that used by Alyeska Pipeline Service Company for Prince William Sound and by Alaska Clean Seas (ACS) on the North Slope.

4.5 LIQUID LEVEL MONITORING [18 AAC 75.425(e)(4)(A)(ii)]

All major active tanks at the DRT have sliding float mechanical gauges to provide a direct means of continuously monitoring liquid levels. The floats used are L&J Controls cable-mounted floats that have an accuracy of about 1/16-inch. Tank levels are continuously input to the SCADA systems for the facility.

Technology evaluated for monitoring liquid levels of the major active crude oil tanks included:

1. Sliding float mechanical gauge.
2. Differential pressure (DP) transmitter/meter.
3. Temperature corrected ultrasound.

Each of these alternatives is evaluated on Table 4-4 per the criteria as set forth in 18 AAC 75.445. In general, all three of these systems are generally comparable, but the sliding float gauges are less sensitive to power and temperature fluctuations. They have also performed adequately since installation and require minimal maintenance, and there is no compelling reason for the current technology to be changed at this time.

Tank CL-4 on the Christy Lee Platform is the only tank not equipped with high liquid-level alarms. This tank is normally filled once per year, and transfer operations are conducted in strict accordance with USCG-approved procedures and include:

- Two people visually monitoring transfer operations onboard the platform;
- Positive means of immediately shutting down the transfer operations;
- Line-of-sight communication at all times between personnel engaged in the transfer;
- Capability for constant communication between personnel to initiate shutdown of operations; and
- Constant direct, visual monitoring of tank levels throughout the transfer.

Once filled, the tank levels will only drop as fuel is used. In this case, installation of a high liquid-level alarm is not believed necessary.

TABLE 4-4: BAT REVIEW FOR LIQUID LEVEL DETERMINATION

BAT EVALUATION CRITERIA	SLIDING FLOAT MECHANICAL GAUGE	DIFFERENTIAL PRESSURE TRANSMITTER/METER	TEMPERATURE CORRECTED ULTRASOUND
Availability	This approach has been used extensively on past installations and is currently used.	This approach has been used extensively on other installations and is available for immediate use.	This approach has been used extensively on other installations and is available for immediate use.
Transferability	The approach is transferable and currently used.	The approach is directly transferable for the proposed operations. On-site personnel are familiar with this system.	The approach is directly transferable for the proposed operations. On-site personnel are not familiar with this system.
Effectiveness	This technology is effective for intermittently used systems. System can work in power outage.	The proposed approach is believed to be effective for intermittently used systems.	This approach is believed to be more effective for constantly used systems.
Cost	This approach has already been incorporated into the existing facilities.	Estimated costs would be approx. $3,000 to $4,000 per tank to install on the existing large tanks.	Estimated costs would be approx. $4,000 to $5,000 per tank to install on the existing large tanks.
Age and Condition	This technology is well established and proven but requires maintenance and monitoring. Existing gauges were replaced in 1993.	This technology is well established and proven but requires maintenance and monitoring.	This technology is well established and proven but requires maintenance and monitoring.
Compatibility	The technology is compatible as it is already being used.	The technology is less compatible as some retrofitting is required.	The technology is less compatible as some retrofitting is required.
Feasibility	The technology is feasible as it is already being used.	The technology is less feasible as some retrofitting is required.	The technology is less feasible as some retrofitting is required.
Environmental Impacts	There are no known environmental impacts for this option.	There are no known environmental impacts for this option.	There are no known environmental impacts for this option.
Applicability to CIPL Operations	Currently in use at the facility.	Generally comparable to the existing system, and no compelling reason to use this system rather than the existing system.	Generally comparable to the existing system, and no compelling reason to use this system rather than the existing system.

4.6 MAINTENANCE OF BURIED STEEL PIPING [18 AAC 75.425(e)(4)(A)(ii)]

Technology evaluated per 18 AAC 75.080(b) to meet these requirements included:

1. Maintenance of an effective cathodic protections system.
2. Preventive maintenance program.
3. Inspection of adjacent piping during piping replacement/repair operations.
4. Use of alternate coatings for piping.

Corrosion inhibitors are not used in the piping as the fluids are classified as non-corrosive.

An effective cathodic protection system is important to minimizing the potential for external corrosion on buried piping. Cathodic protection systems can include passive systems (with sacrificial anodes, etc.), impressed current systems, or a combination of these systems. Protective coatings can supplement these systems. The CIPL operations incorporate protective coatings and cathodic protection in accordance with NACE RP 169-92.

A preventive maintenance (PM) program includes routine checks (as appropriate) of piping, valves, etc., for leaks or other signs of damage. Repair/replacement of worn or damaged parts is part of this program, and work is completed in accordance with the requirements of 18 AAC 75.080. For the purposes of BAT, it is assumed that a computer-based PM program is used.

Inspection of adjacent piping is an accepted (and sometimes required by regulations) BAT for any operations in which buried piping is exposed. Normal procedures would be visual inspection of the general integrity of the protective coatings and possible corrosion.

A variety of protective coatings are available for protection of buried piping. These might include asphalt enamel, fusion-bonded epoxy, polyethylene, and neoprene. For onshore applications, these coatings are primarily intended to protect the piping against external corrosion. For the purposes of BAT review, fusion-bonded epoxy is evaluated.

CIPL's existing system for maintenance of buried piping includes an effective cathodic protection system (impressed current system), adhering to a quality assurance program (PM program) to ensure mechanical integrity, and inspection of adjacent piping during piping replacement/repair operations. Buried piping is nominally covered with cold tar enamel.

All four technologies are compared in Table 4-5. In general, the CIPL systems as presently used are believed to be BAT and no change in the existing system is proposed. Use of fusion-bonded epoxy coatings are not believed appropriate for compatibility and possibly effectiveness issues.

TABLE 4-5: BAT REVIEW FOR MAINTENANCE OF BURIED STEEL PIPING

BAT EVALUATION CRITERIA	IMPRESSED CURRENT CATHODIC PROTECTION	COMPUTER-BASED PM PROGRAM	INSPECTION OF ADJACENT PIPING	FUSION BONDED EPOXY COATINGS
Availability	This technology is available and currently used at the facility.	This technology is available and in use at the facility.	This technology is available and currently used at the facility.	This technology is generally available from several commercial sources.
Transferability	This technology is transferable and currently used at the facility.	This technology is transferable and currently in use at the facility.	This technology is transferable and currently used at the facility.	This technology is generally considered to be directly transferable.
Effectiveness	This technology is believed to be quite effective at the facility.	This technology is believed to be quite effective at the facility.	This technology is believed to be quite effective at the facility.	Fusion bonded epoxy coatings are normally applied in factories under controlled conditions and can be less effective when applied under field conditions for repairs.
Cost	There are ongoing maintenance costs for this technology. Approximately $10K/month based on system.	There are ongoing operational and maintenance costs for this technology. Approximately $1K/month based on system.	There are normally minimal additional costs associated with this activity. Approximately $5K/month based on system.	There might be minimal additional costs associated with maintaining proper heat while the epoxy cures.
Age and Condition	This technology has been used for this type of application for many years.	This technology has been used for this type of application for many years.	This technology has been used for this type of application for many years.	Fusion bonded epoxies have been used for about 10-15 years.
Compatibility	This technology is considered compatible as it is currently used by CIPL.	This technology is considered compatible as it is currently used by CIPL.	This technology is considered compatible as it is currently used by CIPL.	This technology is not necessarily compatible because of problems with field applications of the coating (especially in cold temperatures) and potential concerns with use of dissimilar coatings on adjacent piping (normally not recommended as a normal engineering practice).
Feasibility	This technology is feasible and currently used by CIPL.	This technology is feasible and currently used by CIPL.	This technology is feasible and currently used by CIPL.	This technology is generally considered to be not feasible to retrofit the entire facility.

TABLE 4-5: BAT REVIEW FOR MAINTENANCE OF BURIED STEEL PIPING (CONTINUED)

BAT EVALUATION CRITERIA	IMPRESSED CURRENT CATHODIC PROTECTION	COMPUTER-BASED PM PROGRAM	INSPECTION OF ADJACENT PIPING	FUSION BONDED EPOXY COATINGS
Environmental Impacts	Use of this technology is believed to lessen the potential for adverse environmental impacts.	Use of this technology is believed to lessen the potential for adverse environmental impacts.	Use of this technology is believed to lessen the potential for adverse environmental impacts.	It is unknown whether use of dissimilar coatings on adjacent piping would result in added maintenance problems.
Applicability to CIPL Operations	Currently in use at the facility.	Currently in use at the facility.	Currently practiced at the facility.	Not considered at the facility because of effectiveness, cost, compatibility, and feasibility.

4.7 CORROSION SURVEYS FOR BURIED STEEL PIPING [18 AAC 75.425(e)(4)(A)(ii)]

The pipeline, main crude oil tanks, loading platform, and buried steel piping are all cathodically protected using an impressed-current cathodic protection system that is monitored routinely. Buried pipelines and piping are also externally coated. External corrosion surveys of the entire system are conducted annually and in accordance with NACE RP 169-92 (see Section 2.1).

Piping is subject to the requirements of 18 AAC 75.080(k)(2). Technology evaluated to meet these requirements included:

1. External corrosion surveys.
2. Electronic corrosion monitoring system and surveys.
3. Internal corrosion surveys using smart pigs.

These technologies are compared in Table 4-6.

External corrosion surveys would include digging up buried piping for visual inspection and inspection of piping while it may be exposed for other reasons. CIPL normally does not excavate piping except while repairing the piping. In this case, adjacent piping would be inspected for signs of damage or external corrosion.

The entire facility (offshore platform, onshore facilities, and crude oil transmission pipelines) is currently protected by an impressed current system that is monitored on a bi-monthly basis, and CIPL conducts annual corrosion surveys of the entire facility including the offshore platform, onshore facilities, and crude oil transmission pipelines. Areas having low potential (less than 850 millivolt [mV]) are identified, and corrective actions are evaluated and implemented. These actions might include replacing anodes,

increasing current to the existing anodes, supplementing area with sacrificial anodes, and/or inspecting the integrity of the external piping coatings.

The major pipelines and twin 30-inch loading lines from shore to the platform are equipped with pig launching/receiving capabilities. Buried facility piping is not equipped with pig launching/receiving capabilities and would not currently be capable of being examined using smart pigs (to determine pipeline geometry and wall thickness).

TABLE 4-6: BAT REVIEW FOR CORROSION SURVEYS FOR BURIED STEEL PIPING

BAT EVALUATION CRITERIA	ELECTRONIC CORROSION MONITORING SYSTEM	EXTERNAL CORROSION SURVEY	INTERNAL CORROSION SURVEY
Availability	This approach is currently used at the facility.	This approach has been used extensively and is readily available.	Smart pigs are available for use in the major buried piping at the facility.
Transferability	This approach is currently used at the facility.	The approach is transferable but would be moderately disruptive to facility operations.	The approach would be transferable if the facility piping were modified to launch and receive smart pigs.
Effectiveness	This technology is believed to be relatively effective.	This technology provides only spot checks of corrosion.	The technology is generally effective at determining internal corrosion.
Cost	Installation of this technology would be relatively cost-effective but requires ongoing maintenance and survey costs. Ongoing maintenance ~ $40K annually.	Use of this technology would be relatively expensive and not have a large impact on extending the system life. About $250K annually.	Use of this technology would require installation of additional pig launching/receiving equipment and possible piping modification to permit passage of the smart pigs. Resulting engineering and construction costs would be extremely expensive. Greater than $1M.
Age and Condition	This technology is well established and proven.	This technology is well established and proven, but provides only a snapshot in time.	This technology would involve new construction.
Compatibility	This technology requires ongoing maintenance but is compatible with current operations.	This technology is much more disruptive but has no ongoing maintenance obligations and is more compatible with plant operations.	This technology is not believed to be compatible for the facility as it would require extensive modifications.
Feasibility	The technology is feasible and used at the facility.	The technology is feasible and is used to a limited extent as segments of buried piping are exposed for other purposes.	This technology in not considered for all buried piping at the facility but is currently used for selected high potential risk areas such as the loading lines between the onshore facility and offshore loading platform.
Environmental Impacts	There are no known environmental impacts for this option.	Excavating buried piping has the risk of damaging the piping and possibly producing a spill during the excavation process.	There are no known environmental impacts for this option.
Applicability to CIPL Operations	This technology is currently in use at the facility.	This approach would be used by CIPL in areas having low pipe-to-soil potential (as determined by the annual survey) but would not be used on a routine basis.	This technology is currently used at the two major loading lines but not elsewhere in the facility due to cost, compatibility, and feasibility issues.

4.8 LEAK DETECTION SYSTEMS FOR CRUDE OIL PIPELINES [18 AAC 75.425(e)(4)(A)(iv)]

Technology evaluated per 18 AAC 75.055(a) to meet these requirements included:

1. Mass balance system.
2. Pressure analysis monitoring system.
3. Pipeline integrity management program.

All three technologies are compared in Table 4-7. In general, the CIPL system as presently installed, in combination with the EFA internal monitoring system, is believed to be BAT.

A mass balance system includes careful monitoring of inlet and outlet flow for the pipeline system combined with comparison of these values. Differences would indicate possible leaks. A computer modeling system would typically tie into a SCADA system that monitors the pipeline flow and generate predictable flow patterns over time. The CIPL system monitors pressure and flow. Disturbances such as those caused by temperature variations or varying flow or operating pressure are measured and masked out as "noise." Monthly over/under values are normally within 100 bbl of the total monthly throughput of about 700,000 bbl (0.02%) as determined by tank strapping.

DRT is manned 24 hours per day and the operator on duty constantly monitors pipeline transfer operations via Wonder Ware Software from the operations center and the SCADA system. The SCADA system is accurate to 1 percent of the pipe throughput and has a high degree of reliability. All measurements from GPTF and WFPS are transmitted to the Drift River Operations Room. The Operator takes hourly readings to compare the accumulated totals from the console with what has been received into tankage at DRT. These readings are recorded on the Operator's green sheet and close out at the end of each shift.

Measurements of volumes pumped on this system are by means of A.O. Smith Temperature Compensated Positive Displacement meters located at GPTF, WFPS, and DRT. The GPTF meters are proven monthly unless circumstances necessitate additional provings. The provings are accomplished by using an 8-bbl bi-directional stationary prover loop, which was installed for this purpose. The WFPS meter is proven monthly. These provings are accomplished by using a 23-bbl bi-directional stationary prover loop, which was installed for this purpose. The DRT meter is normally proven monthly. The provings are accomplished by a 10-bbl bi-directional stationary prover loop, which was installed for this purpose.

The EFA (MassPack surveillance system) internal pressure analysis monitoring system is in place. This technology is discussed in detail in ADEC's "Technical Review of Leak Detection Technologies, Volume I. Crude Oil Transmission Pipelines." Reported accuracy for the system is less than 1 percent of the pipe throughput.

TABLE 4-7: BAT REVIEW FOR LEAK DETECTION SYSTEMS IN CRUDE OIL PIPELINES

BAT EVALUATION CRITERIA	MASS BALANCE/COMPUTER MODELING SYSTEM	EFA PRESSURE ANALYSIS MONITORING SYSTEM	PIPELINE INTEGRITY MANAGEMENT PROGRAM
Availability	This approach has been used extensively on past installations and is currently used by CIPL.	This technology is currently used by CIPL.	The technology from this program is currently in use by CIPL.
Transferability	The approach is directly transferable and currently used for the CIPL operations.	This system is transferable and is currently in use for the CIPL operations.	This program is transferable and currently in use by CIPL.
Effectiveness	This method is normally effective in detecting leaks of about 0.5 to 1% of the daily flow. Historically, this method has balanced the system throughputs on average of .0169% of those volumes monthly.	This technology is believed to be effective for CIPL operations.	This program established baseline pipeline integrity conditions subsequent to the initial tool run and to subsequent internal runs, and demonstrated ongoing integrity.
Cost	There are ongoing maintenance costs for sensors. These costs are not specifically separated from normal operating costs.	There are ongoing maintenance and operating costs. About $5K per month.	There are ongoing maintenance and operating costs. These costs are not specifically separated from normal operating costs.
Age and Condition	This technology is well established and proven but requires some maintenance.	New equipment was installed at the time of system installation. Will require maintenance.	New equipment was installed at the time of program start up. Will require maintenance.
Compatibility	The technology is compatible as it is currently in use.	The technology is currently in use and compatible with operations at CIPL.	The technology is compatible and currently in use at CIPL.
Feasibility	The technology is feasible as it is currently used.	The technology is feasible and currently in use at CIPL.	The technology is installed and in use at CIPL.
Environmental Impacts	There are no known environmental impacts for this option.	System is currently in use at CIPL.	System is currently in use at CIPL.
Applicability to CIPL Operations	Currently in use at the facility.	Currently in use at the facility.	Currently in use at the facility.

PART 5. RESPONSE PLANNING STANDARDS [18 AAC 75.425(e)(5)]

5.1 OIL STORAGE TANK RPS [18 AAC 75.432]

ADEC has determined that the RPS volume for a tank rupture at DRT must reflect the volume of oil stored at the facility, as allowed in 18 AAC 75.432(c). Fluids are stored in Tanks 3 and 4. Each tank has a capacity of 270,000 bbl. The total volume of oil stored at the facility therefore is 540,000 bbl (capacity of Tank 3 plus capacity of Tank 4).

This amount is adjusted by prevention measures in place at the facility in accordance with 18 AAC 75.432(d) as follows:

- 5% adjustment for drug and alcohol testing.
- 5% adjustment for operations training program.
- 5% adjustment for on-line leak detection systems.
- 60% adjustment for secondary containment
- 10% adjustment for cathodic protection (10%).

Adjusted RPS volume = 540,000x95%x95%x95%x40%x90% = 166,674 bbl.

5.2 CRUDE OIL TRANSMISSION PIPELINE RPS [18 AAC 75.436]

The RPS for a crude oil pipeline facility is the volume of crude oil that equals the length of the pipeline between pumping or receiving stations or valves (L), minus the hydraulic characteristics of the pipeline due to terrain profile (H), times the capacity of the pipeline in barrels per lineal measure (C), plus the flow rate of the pipeline in barrels per time period (FR), multiplied by the estimated time to detect a spill (TD), plus the time to shut down the pipeline pump or system (TSD). Written as a formula, the RPS of a crude oil pipeline is:

$$(L - H)*C + FR*(TD + TSD)$$

A pipeline break in the northern segment would be the largest oil discharge of the crude oil transmission pipeline. Since the pipeline north of Nikolai Creek is at a slightly higher altitude, the crude oil flow would drain freely at the break until the pipeline check valves are closed. The estimated time to detect a spill event plus the time to shut down the pipeline pump or system is 1 hour.

The following is the calculated RPS for a 20-inch diameter crude oil transmission pipeline:

$$[(67{,}056 \text{ ft} - 0)*0.39 \text{ bbl/ft}] + [42.87 \text{ bbl/min}*(60 \text{ min} + 0)] = 28{,}724 \text{ bbl}$$

Where:

L = 67,056 feet between valves (pipeline Milepost 28.5 and GPTF pipeline Milepost 41.2)

H = 0 (assume no oil remains in the pipeline segment)

C = 0.39 bbl per lineal foot (pi*radius*radius*length) = (3.14*0.83 ft*0.83 ft*1 ft = 2.16 ft^3 and assuming 1 ft^3 = 0.1781 bbl (2.16 ft^3*0.1781 bbl/1 ft^3 = 0.39)

FR = 2,572 bbl per hour = 42.87 bbl per minute

TD = 60 minutes

TSD = 0 minutes (shut down occurs within seconds of spill detection).

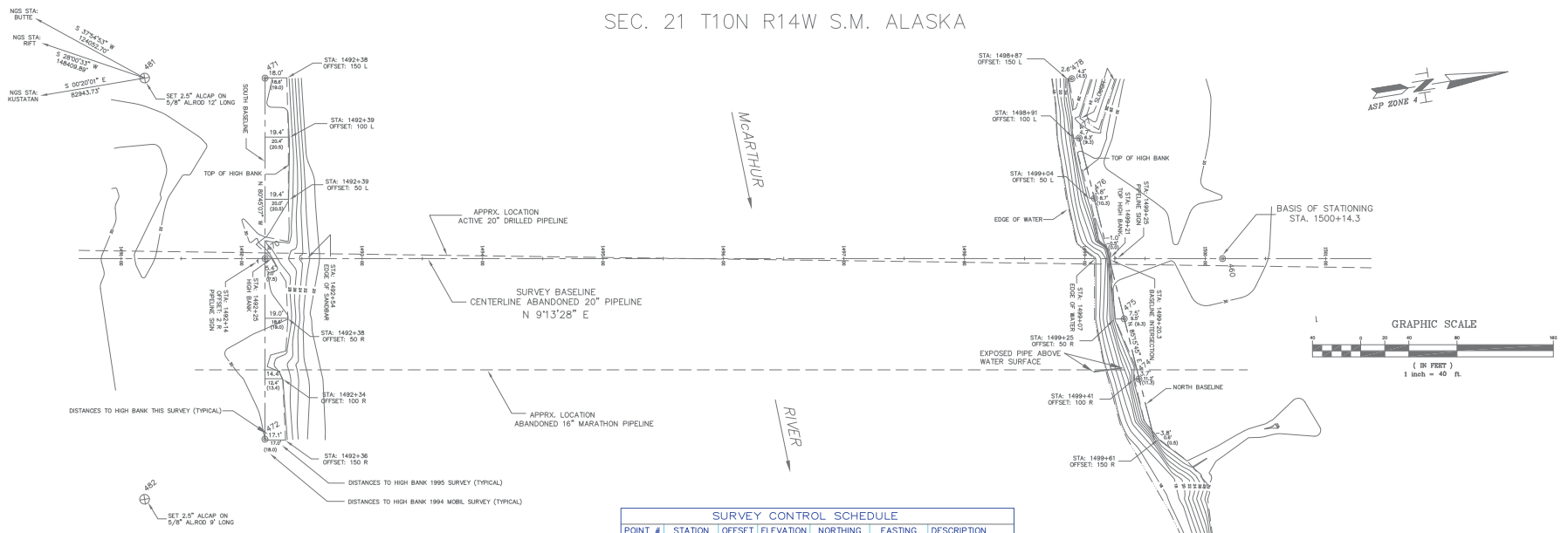
This amount is adjusted by prevention measures in place in accordance with 18 AAC 75.436(c) as follows:

Initial RPS volume	28,724 bbl
Drug and alcohol testing (5%)	(1,436 bbl)
	27,288 bbl]
Operations Training Program (5%)	(1,364 bbl)
	25,924 bbl
On-Line Leak Detection (5%)	(1,296 bbl)
	24,628 bbl]
Annual Cathodic Profile Inspection + ILI cleaning and diagnostic equipment (30%)	(7,388 bbl)
	17,240 bbl
Underwater Cathodic and Burial Profile Inspection (5%)	(862 bbl)
Total adjusted RPS volume	**16,378 bbl**

Appendix A

Additional Figures

KENAI PENNINSULA BOROUGH
SEC. 21 T10N R14W S.M. ALASKA



SURVEY CONTROL SCHEDULE

POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
482	1491+19.5	200.0	30.85	2542190.27	1326160.66	SET MONUMENT
481	1491+19.5	−150.0	31.79	2542246.39	1325815.25	SET MONUMENT
472	1492+19.3	150.1	31.03	2542296.85	1326127.42	FND 1 1/4" ODIP
471	1492+19.4	−149.9	31.84	2542345.06	1325831.31	FND 1 1/4" ODIP
470	1492+19.5	0.0	30.53	2542321.03	1325979.30	FND 1 1/4" ODIP
478	1498+89.2	−149.5	31.80	2543006.12	1325939.12	FND 1 1/4" ODIP
477	1498+95.3	−100.1	28.05	2543004.19	1325988.81	FND 1 1/2" ODIP
476	1499+08.1	−50.1	29.95	2543008.79	1326040.20	FND 1 1/2" ODIP
475	1499+32.7	50.0	31.57	2543017.06	1326143.00	FND 1 1/4" ODIP
474	1499+45.0	100.1	33.84	2543021.12	1326194.38	FND 1 1/4" ODIP
460	1500+14.3	0.0	31.79	2543105.60	1326106.71	FND 1 1/2" ODIP

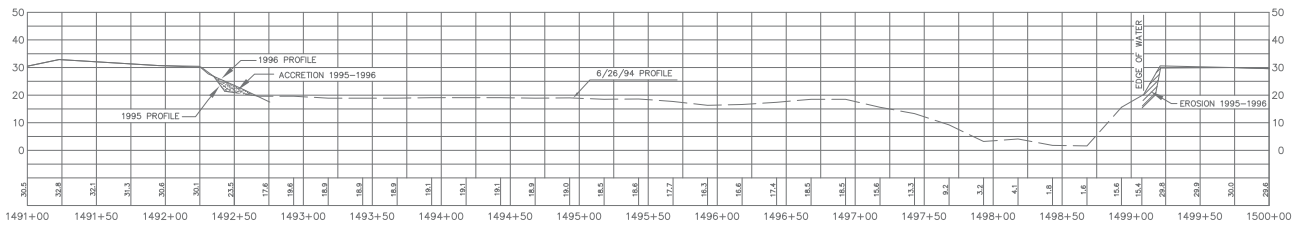
NOTES

1. ALL COORDINATES, BEARINGS, AND DISTANCES ARE ALASKA STATE PLANE ZONE 4 NAD83, GIVEN IN U.S. SURVEY FEET.
2. BASIS OF COORDINATES IS NGS STATION RIFT: N 2411219.42, E 1256120.01
3. BASIS OF BEARINGS IS FROM NGS STATION RIFT TO NGS STATION KUSTATAN: N 55°34'54" E
4. VERTICAL DATUM IS MLLW AS DETERMINED BY NOAA AT DRIFT RIVER TERMINAL IN 1969. SELDOVIA TIDAL DISTRICT, 1941–1959 TIDAL EPOCH.
5. BASIS OF ELEVATIONS IS N.O.S. MONUMENT BM 4 1974 ELEVATION=32.08'

DATUM CONVERSION TO PREVIOUS SURVEYS BY MOBILE PIPELINE COMPANY

ELEVATION AT POINT #460 = 36.87' PER DRAWING D-3635-5A REV 5
ELEVATION AT POINT #460 = 31.79' THIS SURVEY

SUBTRACT 5.08' FROM ELEVATIONS SHOWN ON REFERENCE DRAWINGS TO CONVERT TO THIS DATUM



CENTERLINE PROFILE

HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=20'

NUMBER	SH.	REFERENCE DRAWINGS
D-3635-5A		McARTHUR RIVER CROSSING PLAN AND PROFILE REV 5

NOTES:

1. DATE OF FIELD SURVEY 10-20-95, TNH FB 7877.2
2. DISTANCES FROM 1994 MOBIL SURVEY ARE PER DRAWING D-3635-5A, REV 5
3. CONTOUR INTERVAL IS 2 FEET.

PREPARED BY:
TRYCK NYMAN HAYES, INC.
Surveyors/Engineers/Planners/Landscape Architects
911 WEST 8th AVENUE ANCHORAGE, AK 99501-3497
(907) 279-0543 FAX (907) 276-7679
ALASKA TOLL FREE 1-800-770-0543

REV. NO.	DATE	REVISED (DESTROY ALL PRINTS BEARING EARLIER DATE)	REV. BY	CKD. BY	APP'D
B-1	10-96	REVISED PER FIELD SURVEY 10-1-96, TNH FB 7957-0	WNC	WDC	

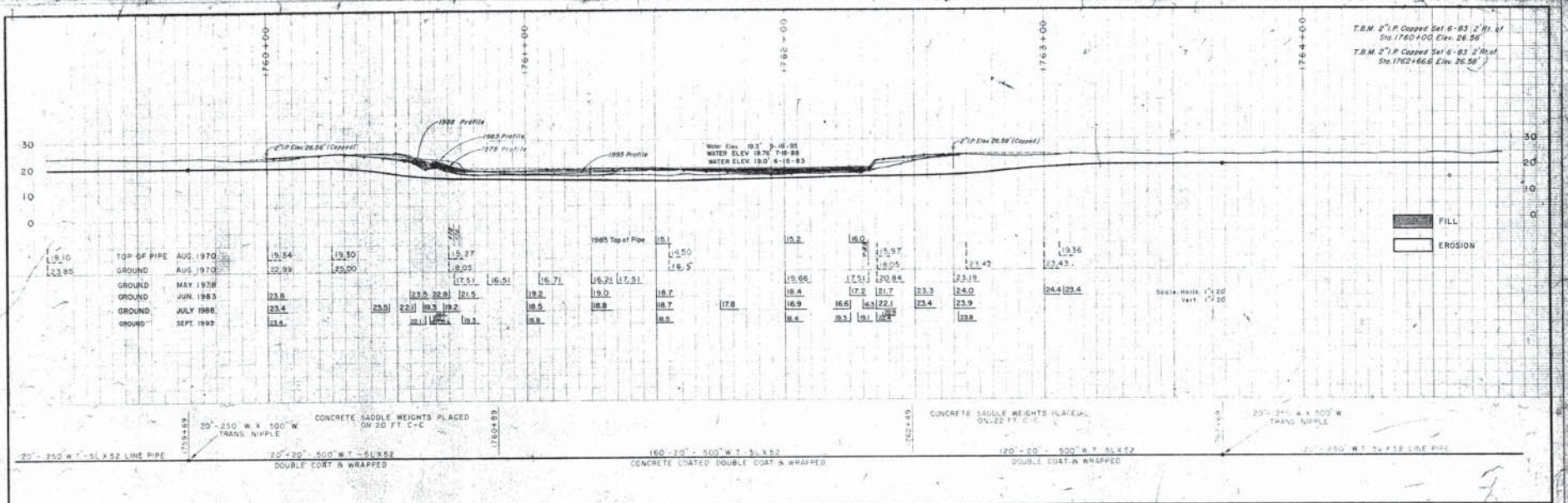
APPROVED FOR CONSTRUCTION		
A.F.E.	DATE	SIGNED

DRAWN BY WNC
CHECKED BY WDC
TRACED BY
TRAC'G. CKD.
APP'D.
APP'D.
SCALE 1"=40'
DATE 11-20-95

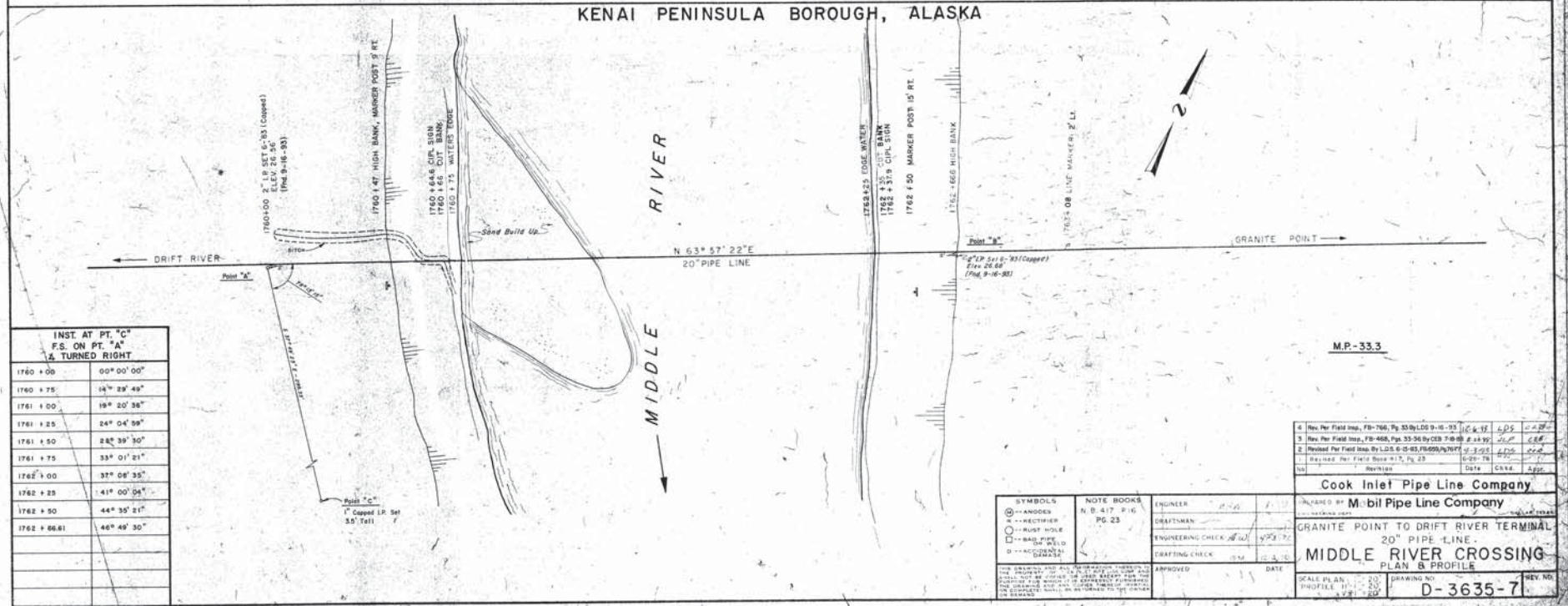
COOK INLET PIPELINE COMPANY
McARTHUR RIVER CROSSING
DRIFT RIVER TO GRANITE POINT 20" PIPELINE

Unocal Corporation
Los Angeles, California
UNOCAL

DRAWING NUMBER
D-3635-5B
SHEET 1 OF 1
CADD FILE: D3635-5B DATE: 11/15/95 BY: WNC REV: B



KENAI PENINSULA BOROUGH, ALASKA



INST. AT PT. "C" F.S. ON PT. "A" & TURNED RIGHT	
1760 + 00	00° 00' 00"
1760 + 75	14° 29' 49"
1761 + 00	19° 20' 38"
1761 + 25	24° 04' 59"
1761 + 50	28° 39' 30"
1761 + 75	33° 01' 21"
1762 + 00	37° 08' 35"
1762 + 25	41° 00' 04"
1762 + 50	44° 35' 21"
1762 + 66.61	46° 49' 30"

SYMBOLS
⊗ = ANODES
R = RECTIFIER
○ = RUST HOLE
□ = BAD PIPE OR WELD
D = ACCIDENTAL DAMAGE

NOTE BOOKS
N. B. 417 Pg. 23

ENGINEER
DRAFTSMAN
ENGINEERING CHECK
DRAFTING CHECK
APPROVED DATE

No.	Revision	Date	Chkd.	Appr.
4	Rev. Per Field Insp., FB-766, Pg. 33 By LDS 9-16-95	12-6-95	LDS	
3	Rev. Per Field Insp., FB-468, Pgs. 33-36 By CEB 7-18-88	8-24-95	CEB	
2	Revised Per Field Insp. By L.D.S. 6-15-83, FB-655, Pg 76/77	9-3-85	LDS	
1	Revised Per Field Book #17, Pg. 23	6-20-78		

Cook Inlet Pipe Line Company

PREPARED BY Mobil Pipe Line Company
DALLAS, TEXAS

GRANITE POINT TO DRIFT RIVER TERMINAL
20" PIPE LINE
MIDDLE RIVER CROSSING
PLAN & PROFILE

SCALE PLAN 1"= 20'
PROFILE 1"= 20'

DRAWING NO. D-3635-7

REV. NO.

APPENDIX B

OPA 90 ADDENDUM

U.S. Environmental Protection Agency
U.S Department of Transportation – PHMSA
U.S. Coast Guard

U.S. ENVIRONMENTAL PROTECTION AGENCY

COOK INLET PIPE LINE COMPANY
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

U.S. ENVIRONMENTAL PROTECTION AGENCY RESPONSE PLAN REQUIREMENTS
[40 CFR 112.20]
CROSS REFERENCE

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
§ 112.20	**FACILITY RESPONSE PLANS.**	
(h)	A response plan shall follow the format of the model facility-specific response plan included in appendix F to this part, unless you have prepared an equivalent response plan acceptable to the Regional Administrator to meet State or other Federal requirements. A response plan that does not follow the specified format in appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in appendix F to this part:	EPA, Appendix B
(h)(1)	Emergency response action plan. The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:	Part 1
(h)(1)(i)	The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;	Section 1.2.3
(h)(1)(ii)	The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;	Section 1.2
(h)(1)(iii)	A description of information to pass to response personnel in the event of a reportable discharge;	Section 1.2
(h)(1)(iv)	A description of the facility's response equipment and its location;	Section 3.6
(h)(1)(v)	A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;	Section 1.2, Section 1.5, Section 3.8, and Section 3.9

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
(h)(1)(vi)	Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;	Evacuation plans are located on the HAC shared drive and hard copies are located at the facility.
(h)(1)(vii)	A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and	Section 1.6
(h)(1)(viii)	A diagram of the facility.	Section 1.8
(h)(2)	Facility information. The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.	Section 3.1, Section 1.2.3
(h)(3)	Information about emergency response. The response plan shall include:	
(h)(3)(i)	The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);	Section 1.6, Section 3.5, Section 3.6
(h)(3)(ii)	Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;	Introduction, Section 3.8
(h)(3)(iii)	The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;	Section 1.2
(h)(3)(iv)	A description of information to pass to response personnel in the event of a reportable discharge;	Section 1.2
(h)(3)(v)	A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;	Section 1.2, Section 1.5, Section 3.8, and Section 3.9
(h)(3)(vi)	A description of the facility's response equipment, the location of the equipment, and equipment testing;	Section 3.6
(h)(3)(vii)	Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;	Evacuation Plans are located and available at the facility.

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
(h)(3)(viii)	A diagram of evacuation routes; and	Evacuation routes are located in the Evacuation Plan located and available at the main office at the facility
(h)(3)(ix)	A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:	Section 1.2.3
(h)(3)(ix)(A)	Activate internal alarms and hazard communication systems to notify all facility personnel;	Section 1.1
(h)(3)(ix)(B)	Notify all response personnel, as needed;	Section 1.2, Section 1.5
(h)(3)(ix)(C)	Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;	Section 1.2, Figure 1-2
(h)(3)(ix)(D)	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 Commission, and Local Emergency Planning Committee;	Section 1.2
(h)(3)(ix)(E)	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;	Section 1.6
(h)(3)(ix)(F)	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);	Section 1.3, Section 1.6
(h)(3)(ix)(G)	Assess and implement prompt removal actions to contain and remove the substance released;	Section 1.6
(h)(3)(ix)(H)	Coordinate rescue and response actions as previously arranged with all response personnel;	Section 1.6
(h)(3)(ix)(I)	Use authority to immediately access company funding to initiate cleanup activities; and	Introduction
(h)(3)(ix)(J)	Direct cleanup activities until properly relieved of this responsibility.	Section 1.6

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
(h)(4)	Hazard evaluation. The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.	Section 2.2, Section 2.3
(h)(5)	Response planning levels. The response plan shall include discussion of specific planning scenarios for:	Section 1.6, Part 5
(h)(5)(i)	A worst case discharge, as calculated using the appropriate worksheet in appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;	Section 1.6, Part 5
(h)(5)(ii)	A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and	Section1.6
(h)(5)(iii)	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, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.	Section 1.6
(h)(6)	Discharge detection systems. The response plan shall describe the procedures and equipment used to detect discharges.	Section 2.5
(h)(7)	Plan implementation. The response plan shall describe:	Introduction
(h)(7)(i)	Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;	Section 1.6
(h)(7)(ii)	A description of the equipment to be used for each scenario;	Section 1.6, Section 3.6, CISPRI Technical Manual
(h)(7)(iii)	Plans to dispose of contaminated cleanup materials; and	Section 1.6, CISPRI Technical Manual

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
(h)(7)(iv)	Measures to provide adequate containment and drainage of discharged oil.	Section 1.6
(h)(8)	Self-inspection, drills/exercises, and response training. The response plan shall include:	Section 3.9
(h)(8)(i)	A checklist and record of inspections for tanks, secondary containment, and response equipment;	Section 2.1.7, Section 2.1.8, Section 3.6, CISPRI Technical Manual
(h)(8)(ii)	A description of the drill/exercise program to be carried out under the response plan as described in §112.21;	Section 3.9
(h)(8)(iii)	A description of the training program to be carried out under the response plan as described in §112.21; and	Section 2.1.1, Section 3.9
(h)(8)(iv)	Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.	Section 2.1.1, Section 3.9
(h)(9)	Diagrams. The response plan shall include site plan and drainage plan diagrams.	Section 1.8
(h)(10)	Security systems. The response plan shall include a description of facility security systems.	Section 2.1.4
(h)(11)	Response plan cover sheet. The response plan shall include a completed response plan cover sheet provided in section 2.0 of appendix F to this part.	Page EPA-6 in Appendix B
(h)(11)(i)(1)	In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.	Not Applicable
(h)(11)(2)	In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.	Not Applicable

REGULATION SECTION 112.20	SECTION TITLE	ODPCP SECTION
(h)(11)(3)	After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.	Not Applicable

U.S. ENVIRONMENTAL PROTECTION AGENCY

RESPONSE PLAN COVER SHEET

Page 1 of 3

GENERAL INFORMATION

Owner/Operator of Facility: Cook Inlet Pipeline Company

Facility Name: Drift River Facility

Facility Address (street address or route): P.O. Box 244027 (Mailing Address)

P.O. Box 244027, West Side of Lower Cook Inlet, Alaska

City, State, and U.S. Zip Code: Anchorage, AK 99524-4027 (Mailing address)

Facility Phone No.: (907) 263-7990

Latitude (Degrees: North): 60º 36'00" N (degrees, minutes, seconds)

Longitude (Degrees: West): 152º 10'00" W (degrees, minutes, seconds)

North American Industrial Classification System (NAICS) Code: 424710

Dun and Bradstreet Number:

Largest Aboveground Oil Storage Tank Capacity (gallons): 270,000

Maximum Oil Storage Capacity (barrels): 1,081,587

Number of Aboveground Oil Storage Tanks: 19 oil storage containers; 50 to 100 drums

Worst Case Oil Discharge Amount (barrels): 270,000

Facility Distance to Navigable Water. Mark the appropriate line.

0-1/4 mile

X 1/4-1/2 mile

1/2-1 mile

>1 mile

U.S. ENVIRONMENTAL PROTECTION AGENCY

RESPONSE PLAN COVER SHEET

Page 2 of 3

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Facility Name: Drift River Facility

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 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 within any aboveground oil storage tank area?

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

U.S. ENVIRONMENTAL PROTECTION AGENCY

RESPONSE PLAN COVER SHEET

REPLACE WITH SIGNED PAGE

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 upon my inquiry of those individuals responsible for obtaining information, I believe the submitted information is true, accurate and complete.

_____ _____

John Barnes
Executive Vice President
Hilcorp Alaska, LLC

Date

U.S. EPA INFORMATION SUMMARY

NAME AND ADDRESS OF OPERATOR:

Cook Inlet Pipe Line Company.
P.O. Box 244027
Anchorage, AK 99524-4027
Phone: (907) 776-6800

Street Address:
3800 Centerpoint Dr., Suite 100
Anchorage, AK 99508
Fax: (907) 776-6800

NAME AND TELEPHONE NUMBER OF QUALIFIED INDIVIDUAL AND ALTERNATE QUALIFIED INDIVIDUAL

See Table 1-1 (ICS Personnel and Telephone Numbers, ICs and QIs for All Incidents) in the Cook Inlet Pipe Line Oil Discharge Prevention and Contingency Plan for the names and telephone numbers of Qualified Individuals.

WORST-CASE DISCHARGE

The worst case discharge (WCD) volume was calculated using equations in 40 CFR 112, Appendix D, Part A.2 secondary containment for multiple-tank facilities.

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?[1]

[1] Secondary containment is described in 40 CFR part 112, subparts A through C. Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

__N__ (Y/N)

If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

__0_ GAL

Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater,
Capacity of largest single aboveground oil storage tank = 270,000 barrels + 0

FINAL WORST CASE VOLUME:[3] _270,000_ Barrels

[3] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

BASIS FOR DETERMINATION OF SIGNIFICANT AND SUBSTANTIAL HARM

Drift River Facility operations have the potential to spill hydrocarbon material into navigable waters of the United States. As such, these operations pose a threat of significant and substantial harm should a spill occur.

The Cook Inlet Prevention and Response, Inc. (CISPRI) *Technical Manual* presents a summary of major spill response equipment contracted by Cook Inlet Pipe Line Company. In addition to contracted equipment, other spill response equipment is available in Cook Inlet through CISPRI and Mutual Aid.

CERTIFICATION OF RESPONSE PERSONNEL AND EQUIPMENT:

CISPRI holds the following Oil Spill Removal Organization (OSRO) certifications:

EPA OPA 90 RESPONSE RESOURCES WORKSHEET

Part I Background Information

Step (A):	Calculate Worst Case Discharge in barrels (40 CFR 112 Appendix D)	270,000 (A)
Step (B):	Oil Group (Section 1.2 of 40 CFR 112 Appendix E)	3
Step (C):	Operating Area (choose one)	
	[X] Nearshore/Inland/Great Lakes [ ] or River and Canals	
Step (D):	Percentages of Oil (Table 2 of 40 CFR 112 Appendix E)	
	Percent Lost to Natural Dissipation	30 (D1)
	Percent Recovered Floating Oil	50 (D2)
	Percent Oil Onshore	50 (D3)
Step (E):	Recovery (in barrels)	
	On-Water Oil Recovery: $\frac{\text{Step (D2) x Step (A)}}{100}$	135,000 (E1)
	Onshore Recovery: $\frac{\text{Step (D3) x Step (A)}}{100}$	135,000 (E2)
Step (F):	Emulsification Factor (Table 3 of 40 CFR 112 Appendix E)	2.0 (F)
Step (G):	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of 40 CFR 112 Appendix E)	
	Tier 1 (12-hr arrival)	.15 (G1)
	Tier 2 (36-hr arrival)	.25 (G2)
	Tier 3 (60-hr arrival)	.40 (G3)

Part II On-Water Recovery Capacity (barrels/day)
(Recovery capacity that must be planned for)

Tier 1 (12-hr arrival): Step (E1) x Step (F) x Step (G1)	40,500 (H1)
Tier 2 (36-hr arrival): Step (E1) x Step (F) x Step (G2)	67,500 (H2)
Tier 3 (60-hr arrival): Step (E1) x Step (F) x Step (G3)	108,000 (H3)

Part III Onshore Cleanup Volume (barrels)
(Shoreline cleanup capacity that must be planned for)

Step (E2) x Step (F)	270,000

Part IV On-Water Response Capacity By Operating Area
(Table 5 of Appendix E)(Amount needed to be contracted for in barrels/day)

Tier 1 (12-hr arrival)	12,500 (J1)
Tier 2 (36-hr arrival)	25,000 (J2)
Tier 3 (60-hr arrival)	50,000 (J3)

Part V On-Water Amount Needed to be Identified, but not contracted for in Advance (barrels/day)

Tier 1 (12-hr arrival): (H1) - (J1)	28,000
Tier 2 (36-hr arrival): (H2) - (J2)	42,500
Tier 3 (60-hr arrival): (H3) - (J3)	58,000

Note: To convert to gallons/day, multiply barrel/day by 42.

U.S. DEPARTMENT OF TRANSPORTATION

COOK INLET PIPELINE COMPANY OPERATIONS
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

U.S. DEPARTMENT OF TRANSPORTATION RESPONSE PLAN REQUIREMENTS
[49 CFR 194, Subpart B]
CROSS REFERENCE

REGULATION SECTION (49 CFR)	SECTION TITLE	ODPCP SECTION
§ 194.109	**SUBMISSION OF STATE RESPONSE PLANS.**	
(a)	In lieu of submitting a response plan required by §194.103, an operator may submit a response plan that complies with a state law or regulation, if the state law or regulation requires a plan that provides equivalent or greater spill protection than a plan required under this part.	USDOT, Appendix B
(b)	A plan submitted under this section must:	
(b)(1)	Have an information summary required by §194.113;	This table (below)
(b)(2)	List the names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s); and	Section 1.2, Table 1-1
(b)(3)	Ensure through contract or other approved means the necessary private personnel and equipment to respond to a worst case discharge or a substantial threat of such a discharge.	Section 1.5, Section 3.5, Section 3.6, CISPRI Technical Manual
§ 194.113	**INFORMATION SUMMARY.**	
(a)	The information summary for the core plan, required by §194.107, must include:	Page USDOT-5 in Appendix B
(a)(1)	The name and address of the operator; and	Page USDOT-5 in Appendix B
(a)(2)	For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in §194.103, a listing and description of the response zones, including county(s) and state(s).	Page USDOT-5 in Appendix B
(b)	The information summary for the response zone appendix, required in §194.107, must include:	
(b)(1)	The information summary for the core plan;	Page USDOT-5 in Appendix B
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s);	Table 1-2, page USDOT-5 in Appendix B
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment;	Page USDOT-5 in Appendix B
(b)(4)	A list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation;	Page USDOT-6 in Appendix B

REGULATION SECTION (49 CFR)	SECTION TITLE	ODPCP SECTION
(b)(5)	The basis for the operator's determination of significant and substantial harm; and	Page USDOT-6 in Appendix B
(b)(6)	The type of oil and volume of the worst case discharge.	Page USDOT-5 in Appendix B

CERTIFICATION OF RESPONSE PREPAREDNESS

Cook Inlet Pipe Line Company
Cook Inlet Crude Oil Transmission Pipeline

REPLACE WITH SIGNED PAGE

Response Plans Officer
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
400 Seventh Street, SW, Room 2103
Washington, DC 20590

Cook Inlet Pipe Line hereby certifies to the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation that it has identified, and ensured by contract or other means to be approved by the Pipeline and Hazardous Materials Safety Administration the availability of private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge.

_____ _____

John Barnes
Executive Vice President
Hilcorp Alaska, LLC

Date

This certification of Response Preparedness was acknowledged before me on _____, by John Barnes on behalf of said corporation.

_____

_____

Date commission expires

NCP / ACP CONSISTENCY CERTIFICATION

REPLACE WITH SIGNED PAGE.

Cook Inlet Pipe Line Company
Cook Inlet Crude Oil Transmission Pipeline

Cook Inlet Pipe Line Company hereby certifies to the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation that it has reviewed the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACPs) and found the Cook Inlet Pipe Line Oil Discharge Prevention and Contingency Plan to be consistent with them. The NCP/ACPs reviewed include the NCP as set forth in 40 CFR 300, as published in 59 FR 47416, September 15, 1994 and the *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharge/Releases* (Unified Plan), Volume I and Volume II (Cook Inlet Subarea Contingency Plan).

_____ _____

John Barnes
Executive Vice President
Hilcorp Alaska, LLC

Date

U.S. DOT INFORMATION SUMMARY

NAME AND ADDRESS OF OPERATOR

Cook Inlet Pipe Line Company.
P.O. Box 244027
Anchorage, AK 99524-4027
Phone: (907) 776-6800

Street Address:
3800 Centerpoint Dr., Suite 100
Anchorage, AK 99508
Fax: (907) 776-6800

RESPONSE ZONE DESCRIPTION

Cook Inlet Pipe Line Company's operating unit consists of a single response zone two onshore pipelines. One onshore pipeline is the Cook Inlet transmission pipeline and is approximately 41.5 miles long between Granite Point Tank Farm and Drift River Facility. The second crude oil transmission pipieline is approximately 2.5 miles long from the Trading Bay Production Facility and ties into the 41.5 mile long pipeline.

NAME AND TELEPHONE NUMBER OF QUALIFIED INDIVIDUAL

See Table 1-2 (Incident Commander and Qualified Individual Telephone Numbers) in the Cook Inlet Oil Discharge Prevention and Contingency Plan for the names and telephone numbers of Qualified Individuals.

WORST-CASE DISCHARGE

In accordance with 49 CFR 194.105(b)(3), the worst-case discharge (WCD) is the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system.

Capacity of the largest breakout Tank #3: 270,000 barrels

US DOT PHMSA WCD = 270,000 barrels of Cook Inlet Crude Oil

SUBSTANTIAL THREAT

Events and conditions that can pose a substantial threat of a WCD and procedures to eliminate or mitigate threat of a discharge are identified in Cook Inlet Pipe Line Company Pipeline USDOT Operations Manual," Additional conditions are summarized as follows:

POTENTIAL THREAT	OPERATOR ACTION(S)
NATURAL DISTURBANCES	
Major Earthquake	Monitors SCADA system and alarms to determine if signs of potential pipeline problems. If unexplained irregularities are observed, either flow is reduced or the line is shut down.
Volcanic Eruptions	If especially severe dust problems, electronic systems (and pipeline) may be shut down or be operated at a reduced flow. Monitor flow in the Drift River for eruptions of Mt. Redoubt. Pipeline may be shut down in the event flooding from snow/ice melting is detected
Flooding	Monitor major river crossings on a more frequent basis during major flood events. If high bank erosion is noted at major river crossings, the pipeline may be shut down.

TECHNOLOGICAL FAILURES	
SCADA System Failure	System automatically shuts down. Pipeline pressures can be monitored manually.
Communications System Failure	Control system contained on platform and not affected by communications failures. Alternate communications systems are available (see Section 1.4).
SECURITY ISSUES	
Bomb Threat	Operator reports to management, and management directs appropriate operational responses. (Management reports threat to State Police.)
Vandalism	Pipelines are buried and in a generally remote area. Vandalism would normally not be noticed unless it resulted in a pressure drop, which would be detected by SCADA system. Vandalism would likely be detected during pipeline inspections.

DESCRIPTION OF THE LINE SECTIONS

Cook Inlet Pipe Line Company's crude oil transmission consists of two onshore pipelines. One onshore pipeline is approximately 41.5 miles long between Granite Point Tank Farm and Drift River Facility. The second crude oil transmission pipeline is approximately 2.5 miles long running from the Trading Bay Production Facility and ties into the 41.5 mile long pipeline at pipeline milepost 19.8. The 41.5 mile pipeline has block valves located at Granite Point, terminus at Drift River Facility, each major river crossing and at the tie-in pipeline from Trading Bay Production Facility. The 2.51 mile pipeline has block valves at Trading Bay Facility and the tie-in of the 41.5 miles pipeline (See Section 2.1)

BASIS FOR DETERMINATION OF SIGNIFICANT AND SUBSTANTIAL HARM

The pipeline is expected to pose significant and substantial harm in the event of an oil spill. The pipeline lies within one mile of state wildlife refuge and seabird concentration areas.

CERTIFICATION OF RESPONSE PERSONNEL AND EQUIPMENT

Sufficient response personnel and equipment is available to respond to a WCD or threat of such a discharge. This information is provided in Sections 1.6, Response Scenarios and Strategies; 3.5, Logistical Support; 3.6, Response Equipment; and 3.8, Response Contractor Information.

DRINKING WATER

A crude oil spill would not harm drinking water source.

U.S. COAST GUARD

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COOK INLET PIPE LINE
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

U.S. COAST GUARD AND DEPARTMENT OF HOMELAND SECURITY
RESPONSE PLANS FOR OIL FACILITIES
TRANSFERRING OIL OR HAZARDOUS MATERIAL IN BULK
[33 CFR 154]
CROSS REFERENCE

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
1035 (a)	*Introduction and Plan Content*	Table of Contents and Introduction
(a)(1)	The facility's name, street address, city, county, state, ZIP code, facility telephone number, and telefacsimile number, if so equipped. Include mailing address if different from street address.	Introduction
(a)(2)	The facility's location described in a manner that could aid both a reviewer and a responder in locating the specific facility covered by the plan, such as, river mile or location from a known landmark that would appear on a map or chart.	Introduction, Sections 1.8, 3.1,
(a)(3)	The name, address, and procedures for contacting the facility's owner or operator on a 24-hour basis.	Sections 1.1 and 1.2
(a)(4)	Table of contents	Table of Contents
(a)(5)	During the period that the submitted plan does not have to conform to the format contained in this subpart, a cross index, if appropriate.	This Table
(a)(6)	A record of change(s) to record information on plan updates.	Record of Revisions
(b)	*Emergency Response Action Plan.* This section of the plan must be organized in the subsections described in this paragraph:	Part 1
(b)(1)	*Notification procedures.*	Sections 1.1 1.2 and 3.3
(b)(1)(i)	This subsection must contain a prioritized list identifying the person(s), including name, telephone number, and their role in the plan, to be notified of a discharge or substantial threat of a discharge of oil. The telephone number need not be provided if it is listed separately in the list of contacts required in the plan. This Notification Procedures listing must include—	
(b)(1)(i)(A)	Facility response personnel, the spill management team, oil spill removal organizations, and the qualified individual(s) and the designated alternate(s); and	Sections 1.1, 1.2 , and Figure 1-1
(b)(1)(i)(B)	Federal, State, or local agencies, as required.	Section 1.2.2, and Table 1-2

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(b)(1)(ii)	This subsection must include a form, such as that depicted in Figure 1, which contains information to be provided in the initial and follow-up notifications to Federal, State, and local agencies. The form shall include notification of the National Response Center as required in part 153 of this chapter. Copies of the form also must be placed at the location(s) from which notification may be made. The initial notification form must include space for the information contained in Figure 1. The form must contain a prominent statement that initial notification must not be delayed pending collection of all information.	Figure 1-2
(b)(2)	*Facility's spill mitigation procedures.*	
1035 (b)(2)(i)	This subsection must describe the volume(s) and oil groups that would be involved in the—	
(b)(2)(i)(A)	Average most probable discharge from the marine transfer-related (MTR) facility	Section 1.6.8, page USCG-9 in Appendix B
(b)(2)(i)(B)	Maximum most probable discharge from the MTR facility	Section 1.6, page USCG-9 in Appendix B
(b)(2)(i)(C)	Worst case discharge from the MTR facility	Section 1.6, page USCG-9 in Appendix B
(b)(2)(i)(D)	Where applicable, the worst case discharge from the non-transportation-related facility. This must be the same volume provided in the response plan for the non-transportation-related facility.	Not applicable.
(b)(2)(ii)	This subsection must contain prioritized procedures for facility personnel to mitigate or prevent any discharge or substantial threat of a discharge of oil resulting from operational activities associated with internal or external facility transfers including specific procedures to shut down affected operations. Facility personnel responsible for performing specified procedures to mitigate or prevent any discharge or potential discharge shall be identified by job title. A copy of these procedures shall be maintained at the facility operations center. These procedures must address actions to be taken by facility personnel in the event of a discharge, potential discharge, or emergency involving the following equipment and scenarios:	
(b)(2)(ii)(A)	Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, as appropriate;	Section 1.6
(b)(2)(ii)(B)	Tank overfill	Sections 2.1.5, 2.1.10 and 3.1
(b)(2)(ii)(C)	Tank failure	Section 2.3
(b)(2)(ii)(D)	Piping rupture	Section 2.3
(b)(2)(ii)(E)	Piping leak, both under pressure and not under pressure, if applicable;	Section 2.1.9
(b)(2)(ii)(F)	Explosion or fire	Section 1.6

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(b)(2)(ii)(G)	Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers.)	Sections 1.6 and 2.1.5
(b)(2)(iii)	This subsection must contain a listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge.	Sections 3.5 and 3.6
(b)(3)	*Facility's response activities.*	Sections 1.1 and 3.3; Table 1-1; and Figure 1-1
(b)(3)(i)	This subsection must contain a description of the facility personnel's responsibilities to initiate a response and supervise response resources pending the arrival of the qualified individual.	Sections 1.1 and 3.3; and Figure 1-1
(b)(3)(ii)	This subsection must contain a description of the responsibilities and authority of the qualified individual and alternate as required in §154.1026.	Sections 1.1, 1.2, and 3.3
(b)(3)(iii)	This subsection must describe the organizational structure that will be used to manage the response actions. This structure must include the following functional areas.	Sections 1.1, 1.2, and 3.3
(b)(3)(iii)(A)	Command and control	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(B)	Public information	Sections 1.1, 1.2 and 1.6
1035 (b)(3)(iii)(C)	Safety	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(D)	Liaison with government agencies	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(E)	Spill Operations	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(F)	Planning	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(G)	Logistics support	Sections 1.1, 1.2 and 1.6
(b)(3)(iii)(H)	Finance	Sections 1.1, 1.2 and 1.6
(b)(3)(iv)	This subsection of the plan must identify the oil spill removal organizations and the spill management team that will be capable of providing the following resources:	Sections 1.1, 1.2, and 3.3
(b)(3)(iv)(A)	Equipment and supplies to meet the requirements of §§154.1045, 154.1047, or subparts H or I of this part, as appropriate.	Sections 1.6, 3.5, and 3.6
(b)(3)(iv)(B)	Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization and spill management team for the first 7 days of the response.	Section 3.8
(b)(3)(v)	This section must include job descriptions for each spill management team member within the organizational structure described in paragraph (b)(3)(iii) of this section. These job descriptions must include the responsibilities and duties of each spill management team member in a response action.	Table 1-2

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(b)(3)(vi)	For facilities that handle, store, or transport group II through group IV petroleum oils, and that operate in waters where dispersant use is pre-authorized, this subsection of the plan must also separately list the resource providers and specific resources, including appropriately trained dispersant application personnel, necessary to provide the dispersant capabilities required in this subpart. All resource providers and resources must be available by contract or other approved means as described in §154.1028(a). The dispersant resources to be listed within this section must include the following:	Not Applicable
(b)(3)(vi)(A)	Identification of each primary dispersant staging site to be used by each dispersant-application platform to meet the requirements of this subpart.	Not Applicable
(b)(3)(vi)(B)	Identification of the platform type, resource-providing organization, location, and dispersant payload for each dispersant-application platform identified. Location data must identify the distance between the platform's home base and the identified primary dispersant staging site for this section.	Not Applicable
(b)(3)(vi)(C)	For each unit of dispersant stockpile required to support the effective daily application capacity (EDAC) of each dispersant-application platform necessary to sustain each intended response tier of operation, identify the dispersant product resource provider, location, and volume. Location data must include the stockpile's distance to the primary staging sites where the stockpile would be loaded onto the corresponding platforms.	Not Applicable
(b)(3)(vi)(D)	If an oil spill removal organization has been evaluated by the Coast Guard, and its capability is equal to or exceeds the response capability needed by the owner or operator, the section may identify only the oil spill removal organization, and not the information required in paragraphs (b)(3)(vi)(A) through (b)(3)(vi)(C) of this section.	Not Applicable
1035 (b)(3)(vii)	This subsection of the plan must also separately list the resource providers and specific resources necessary to provide aerial oil tracking capabilities required in this subpart. The oil tracking resources to be listed within this section must include the following:	Sections 1.6 3.5, and 3.6
(b)(3)(vii)(A)	The identification of a resource provider; and	Sections 1.6 3.5, and 3.6
(b)(3)(vii)(B)	Type and location of aerial surveillance aircraft that are ensured available, through contract or other approved means, to meet the oil tracking requirements of §154.1045(j).	Section 1.6, CISPRI Technical Manual
(b)(3)(viii)	For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk.	Not Applicable

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(b)(3)(ix)	For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv)(A) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk.	Not Applicable
(b)(4)	*Fish and wildlife and sensitive environments*	Sections 1.6 and 3.10
(b)(4)(i)	This section of the plan must identify areas of economic importance and environmental sensitivity, as identified in the ACP, which are potentially impacted by a worst case discharge. ACPs are required under section 311(j)(4) of the FWPCA to identify fish and wildlife and sensitive environments. The applicable ACP shall be used to designate fish and wildlife and sensitive environments in the plan. Changes to the ACP regarding fish and wildlife and sensitive environments shall be included in the annual update of the response plan, when available.	Sections 1.6 and 3.10
(b)(4)(ii)	For a worst case discharge from the facility, this section of the plan must—	USCG-X, and Section 1.6
(b)(4)(ii)(A)	List all fish and wildlife and sensitive environments identified in the ACP which are potentially impacted by a discharge of persistent oils, non-persistent oils, or non-petroleum oils.	Sections 1.6and 3.10
(b)(4)(ii)(B)	Describe all the response actions that the facility anticipates taking to protect these fish and wildlife and sensitive environments.	Sections 1.6 and 3.10
(b)(4)(ii)(C)	Contain a map or chart showing the location of those fish and wildlife and sensitive environments which are potentially impacted. The map or chart shall also depict each response action that the facility anticipates taking to protect these areas. A legend of activities must be included on the map page.	Section 3.10
(b)(4)(iii)	For a worst case discharge, this section must identify appropriate equipment and required personnel, available by contract or other approved means as described in §154.1028, to protect fish and wildlife and sensitive environments which fall within the distances calculated using the methods outlined in this paragraph as follows:	
1035 (b)(4)(iii)(A)	Identify the appropriate equipment and required personnel to protect all fish and wildlife and sensitive environments in the ACP for the distances, as calculated in paragraph (b)(4)(iii)(B) of this section, that the persistent oils, non-persistent oils, or non-petroleum oils are likely to travel in the noted geographic area(s) and number of days listed in table 2 of appendix C of this part;	Section 1.6
(b)(4)(iii)(B)	Calculate the distances required by paragraph (b)(4)(iii)(A) of this section by selecting one of the methods described in this paragraph;	
(b)(4)(iii)(B)(1)	Distances may be calculated as follows:	

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(b)(4)(iii)(B)(1)(*i*)	For persistent oils and non-petroleum oils discharged into non-tidal waters, the distance from the facility reached in 48 hours at maximum current.	Not applicable.
(b)(4)(iii)(B)(1)(*ii*)	For persistent and non-petroleum oils discharged into tidal waters, 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.	Section 1.6
(b)(4)(iii)(B)(1)(*iii*)	For non-persistent oils discharged into non-tidal waters, the distance from the facility reached in 24 hours at maximum current.	Not applicable.
(b)(4)(iii)(B)(1)(*iv*)	For non-persistent oils discharged into tidal waters, 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.	Section 1.6
(b)(4)(iii)(B)(2)	A spill trajectory or model may be substituted for the distances calculated under paragraph (b)(4)(iii)(B)(l) of this section. The spill trajectory or model must be acceptable to the COTP.	Section 1.6
(b)(4)(iii)(B)(3)	The procedures contained in the Environmental Protection's Agency's regulations on oil pollution prevention for non-transportation-related onshore facilities at 40 CFR part 112, appendix C, Attachment C-III may be substituted for the distances listed in non-tidal and tidal waters; and	Not applicable.
(b)(4)(iii)(C)	Based on historical information or a spill trajectory or model, the COTP may require the additional fish and wildlife and sensitive environments also be protected.	
(b)(5)	*Disposal Plan.* This subsection must describe any actions to be taken or procedures to be used to ensure that all recovered oil and oil contaminated debris produced as a result of any discharge are disposed according to Federal, state, or local requirements.	Section 1.6
(c)	*Training and exercises.* This section must be divided into the following two subsections:	
(c)(1)	*Training procedures.* This subsection must describe the training procedures and programs of the facility owner or operator to meet the requirements in §154.1050.	Sections 2.1.1 and 3.9
(c)(2)	*Exercise procedures.* This subsection must describe the exercise program to be carried out by the facility owner or operator to meet the requirements in §154.1055.	Sections 2.1.1 and 3.9
1035 (d)	*Plan review and update procedures.* This section must address the procedures to be followed by the facility owner or operator to meet the requirements of §154.1065 and the procedures to be followed for any post-discharge review of the plan to evaluate and validate its effectiveness.	Introduction
(e)	*Appendices.* This section of the response plan must include the appendices described in this paragraph.	
(e)(1)	*Facility-specific information.* This appendix must contain a description of the facility's principal characteristics.	Section 3.1

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(e)(1)(i)	There must be a physical description of the facility including a plan of the facility showing the mooring areas, transfer locations, control stations, locations of safety equipment, and the location and capacities of all piping and storage tanks.	Sections 1.8 and 3.1
(e)(1)(ii)	The appendix must identify the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously.	Section 2.1.5
(e)(1)(iii)	The appendix must identify the first valve(s) on facility piping separating the transportation-related portion of the facility from the non-transportation-related portion of the facility, if any. For piping leading to a manifold located on a dock serving tank vessels, this valve is the first valve inside the secondary containment required by 40 CFR part 112.	Appendix A
(e)(1)(iv)	The appendix must contain information on the oil(s) and hazardous material handled, stored, or transported at the facility in bulk. A material safety data sheet meeting the requirements of 29 CFR 1910.1200, 33 CFR 154.310(a)(5) or an equivalent will meet this requirement. This information can be maintained separately providing it is readily available and the appendix identifies its location. This information must include—	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(iv)(A)	The generic or chemical name;	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(iv)(B)	A description of the appearance and odor;	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(iv)(C)	The physical and chemical characteristics;	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(iv)(D)	The hazards involved in handling the oil(s) and hazardous materials. This shall include hazards likely to be encountered if the oil(s) and hazardous materials come in contact as a result of a discharge; and	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(iv)(E)	A list of firefighting procedures and extinguishing agents effective with fires involving the oil(s) and hazardous materials.	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(1)(v)	The appendix may contain any other information which the facility owner or operator determines to be pertinent to an oil spill response.	MSDSs are maintained and available at the office building at the DRT Facility.
(e)(2)	*List of contacts.* This appendix must include information on 24-hour contact of key individuals and organizations. If more appropriate, this information may be specified in a geographic-specific appendix. The list must include—	
(e)(2)(i)	The primary and alternate qualified individual(s) for the facility;	Table 1-2
(e)(2)(ii)	The contact(s) identified under paragraph (b)(3)(iv) of this section for activation of the response resources; and	Table 1-2
(e)(2)(iii)	Appropriate Federal, State, and local officials.	Figure 1-1 and Table 1-2
1035 (e)(3)	*Equipment list and records.* This appendix must include the information specified in this paragraph.	Section 3.6

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
(e)(3)(i)	The appendix must contain a list of equipment and facility personnel required to respond to an average most probable discharge, as defined in §154.1020. The appendix must also list the location of the equipment.	Sections 1.1, 3.3, and 3.6
(e)(3)(ii)	The appendix must contain a detailed listing of all the major equipment identified in the plan as belonging to an oil spill removal organization(s) that is available, by contract or other approved means as described in §154.1028(a), to respond to a maximum most probable or worst case discharge, as defined in §154.1020. The detailed listing of all major equipment may be located in a separate document referenced by the plan. Either the appendix or the separate document referenced in the plan must provide the location of the major response equipment.	Section3.6, CISPRI Technical Manual
(e)(3) (iii)	It is not necessary to list response equipment from oil spill removal organization(s) when the organization has been classified by the Coast Guard and their capacity has been determined to equal or exceed the response capability needed by the facility. For oil spill removal organization(s) classified by the Coast Guard, the classification must be noted in this section of the plan. When it is necessary for the appendix to contain a listing of response equipment, it shall include all of the following items that are identified in the response plan: Skimmers; booms; dispersant application, in-situ burning, bioremediation equipment and supplies, and other equipment used to apply other chemical agents on the NCP Product Schedule (if applicable); communications, firefighting, and beach cleaning equipment; boats and motors; disposal and storage equipment; and heavy equipment. The list must include for each piece of equipment—	Section 3.6
(e)(3)(iii)(A)	The type, make, model, and year of manufacture listed on the nameplate of the equipment;	
(e)(3)(iii)(B)	For oil recovery devices, the effective daily recovery rate, as determined using section 6 of appendix C of this part;	
(e)(3)(iii)(C)	For containment boom, the overall boom height (draft and freeboard) and type of end connectors;	
(e)(3)(iii)(D)	The spill scenario in which the equipment will be used for or which it is contracted;	
(e)(3)(iii)(E)	The total daily capacity for storage and disposal of recovered oil;	
(e)(3)(iii)(F)	For communication equipment, the type and amount of equipment intended for use during response activities. Where applicable, the primary and secondary radio frequencies must be specified.	
(e)(3)(iii)(G)	Location of the equipment; and	
(e)(3)(iii)(H)	The date of the last inspection by the oil spill removal organization(s).	

REGULATION SECTION (33 CFR 154)	SECTION TITLE	ODPCP SECTION
1035 (e)(4)	*Communications plan.* This appendix must describe the primary and alternate method of communication during discharges, including communications at the facility and at remote locations within the areas covered by the response plan. The appendix may refer to additional communications packages provided by the oil spill removal organization. This may reference another existing plan or document.	Sections 1.4 and 4.1
(e)(5)	*Site-specific safety and health plan*. This appendix must describe the safety and health plan to be implemented for any response location(s). It must provide as much detailed information as is practicable in advance of an actual discharge. This appendix may reference another existing plan requiring under 29 CFR 1910.120.	Section 1.3
(e)(6)	*List of acronyms and definitions.* This appendix must list all acronyms used in the response plan including any terms or acronyms used by Federal, State, or local governments and any operational terms commonly used at the facility. This appendix must include all definitions that are critical to understanding the response plan.	List of Acronyms

USCG POTENTIAL DISCHARGES

AVERAGE MOST PROBABLE DISCHARGE

The average most probable discharge is calculated as approximately 50 bbl of crude oil, based on the definition contained in 33 CFR 154.1020 (the lesser of 50 bbl or 1 percent of the volume of the WCD).

MAXIMUM MOST PROBABLE DISCHARGE

The maximum most probable discharge is 1,200 bbl of crude oil, calculated from the definition contained in 33 CFR 154.1020 (the lesser of 1,200 bbl, or 10 percent of the volume of the WCD).

WORST-CASE DISCHARGE

The definition of a WCD under the U.S. Coast Guard (USCG) and Department of Homeland Security regulations for a marine transfer related facility (MTR) that transfers oil or hazardous material in bulk is found in at 33 CFR 154.1029.

A USCG WCD is based on calculations of loss from in-line and break out tank(s) needed for the continuous operation of the pipelines used for the purposes of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment, plus from all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the facility. For a mobile facility it means the entire contents of the container in which the oil is stored or transported. A response plan must use the appropriate criteria to develop the worst-case discharge. For this ODPCP the worst-case discharge scenario assumes a flange cracks and/or hose ruptures during loading operations of a vessel.

Based on the definition contained in 33 CFR 154.1029(b)(2), the values to calculate WCD are:

- Maximum time to discover release: 0.08 hours (5 minutes),
- Maximum time to shutdown pumping: 0.05 hours (195 seconds),
- Maximum transfer rate: 33,000 barrels per hour (bbl/hr) and
- Total line drainage volume: 23,100 bbl (42" pipeline, 30" S pipeline and 30" N pipeline combined)

The formula for calculating the WCD is:

(Maximum time to discover the release + maximum time to shutdown pumping) x maximum transfer rate + total line drainage volume, or

[(0.08 hour + 0.05 hour) x 33,000 bbl/hr] + 23,100 bbl = 27,390 barrels

TYPE OF PRODUCT SPILLED:	Cook Inlet Crude Oil.
CAUSE:	Rupture of the main transfer line at the Christy Lee Platform.
ENVIRONMENTAL CONDITIONS:	Winds 16 knots from the north-northeast (prevailing wind direction), average temperature 37°F for October.
SPILL TRAJECTORY:	The entire content enters Cook Inlet. Refer to Section 1.6 for a detailed analysis of environmental conditions and spill trajectory.