APPENDIX A

BEST MANAGEMENT PRACTICES AND PROCEDURES

FLUID TRANSFER GUIDELINES

The following information on personnel safety and safe handling procedures for fluid transfer protocol follows the best management practices (BMP) of North Slope Operations as compiled from the *Alaska Safety Handbook* (2002). Information on the use of surface liners and drip pans is a jointly issued Unified Operating Procedure (UOP), summarized from the *North Slope Environmental Handbook* (May 2001).

OBJECTIVE

The objective of the Fluid Transfer Guidelines is to establish minimum requirements to protect the safety and health of employees when using vacuum and tanker trucks to transfer flammable and combustible fluids to or from non-permanent facilities. The objectives are to ensure that:

- Vacuum trucks shall never be directly hooked-up to pressurized lines or vessels. Tanks are not considered pressure vessels. Fluids discharged from pressurized sources are to be flowed into tanks rather than directly to the vacuum unit.
- Equipment used during transfer of flammable and combustible fluids meets applicable safety requirements.
- The layout of equipment adequately separates potential ignition sources from potential sources of flammable or combustible vapors or liquids, and provides for personnel egress.
- All personnel involved in transfer operations use appropriate precautions for handling flammable and combustible fluids.

EXCEPTIONS

Equipment fueling operations, permanent loading and unloading facilities (e.g., bulk fuel loading dock, oily waste, recycle facilities, and fixed chemical tanks), pumping fluid into a well, flowline, or other permanent facility, or routine use of a drill site or well pad bleed tank will continue according to established safe operating procedures.

RESPONSIBILITIES

Vehicle Contractor/Operator. Ensure proper training, safe operation, and maintenance of their equipment.

Company Representative. A Company Representative shall perform the following pre-job checkout before the start of any flammable or combustible fluid transfer to or from a non-permanent facility. If a particular situation cannot meet specifics of the following requirements, the Company Representative will take appropriate steps to safeguard personnel and equipment.

- Inspect the site of the loading and unloading operations. If a Contract Foreman will supervise the work, conduct the site visit with the Contract Foreman. Conduct a pre-job safety discussion and a job scope review, including the potential hazards of the work and emergency procedures, with all participants.
- Survey the truck and equipment to assure compliance with the policy criteria.
- Review loading positions, emergency escape routes, and fire lanes.
- Complete a pre-job safety meeting identifying potential hazards and escape routes. Identify a minimum of two emergency exit paths leading away from the transfer area for personnel

egress. At least two exit routes must be unobstructed with a minimum width of 5 feet and should be established perpendicular to the prevailing wind direction.

A Company Representative shall perform the following:

- Review the wind direction relative to the trucks and equipment layout. Monitor the prevailing wind conditions so any potential sources of hydrocarbons are kept at least 25 feet downwind of any potential ignition source.
- Locate the inlet and/or outlet piping (truck connections) and truck-mounted fluid pumping equipment 25 feet or more downwind from any potential ignition source on the site or on the back of the truck.
- Ensure the trucks and/or tank involved in the transfer are separated by at least 25 feet.
- Review positions of fire extinguishing equipment and ensure the operator is trained in its proper use.
- Maintain a minimum unobstructed pathway of 20 feet for fire and emergency vehicle access to the transfer area.
- Assure continuous electrical bonding between transfer equipment.
- Use the Unit Work Permit with the checklist on the back for all operations covered by this policy when a Company Representative is not present for the entire transfer.
- When venting at low ambient temperatures, there is potential for the vented gas to condense and possibly freeze off the vent and check valves. Ensure that when applicable, the operator monitors the condition and takes appropriate actions to mitigate the hazard.
- Test the means of communication for proper function.
- Ensure flammable and combustible fluids to be vacuumed are at least 40 degrees below their flash point.
- Liquid flash point measurement will be required for vacuumed operations as warranted by the Company Representative. Frequent tests are suggested, especially where the material may not be homogeneous.

A Company Representative shall ensure the North Slope Unified Operator Procedure on the use of drip pans/surface liners is followed for environmental protection, as described below.

NORTH SLOPE FLUID TRANSFER GUIDELINES

Note: SAFETY is the first and foremost goal in all operations, including the transfer of all fluids. It is EVERYONE'S responsibility to ensure all related safety and environmental guidelines are being followed at all times.

1) Check all vehicles and/or equipment. Ensure that it is has been properly maintained and that there are no leaking parts. If your vehicle or equipment does not appear to be in proper order and leaks are apparent, stop the job and have adequate repairs done. In accordance with field operating procedures, a surface liner may be used for a short period of time under critical use equipment.

2) Stage vehicles away from water bodies, tundra and wildlife habitats. Staging or parking of vehicles and equipment in off-pad locations or on-pad edges should be avoided whenever possible.

3) Position equipment so that valves, piping, tanks, etc., are protected from damage by other vehicles or heavy equipment.

4) Verify that adequate secondary containment and absorbent pads are on hand. Use according to published field operating procedures.

5) Before starting any fluid transfer operation, inspect all hoses, connections, valves, etc. Ensure that these items have been properly maintained; gaskets are present and in good shape; all valves are checked to verify they're in the proper on/off position, and that each connection is tightened properly.

6) Prior to the actual fluid transfer, check all tank and container levels, valves, and vents to prevent overfilling or accidental releases.

7) Use secondary containment under all appropriate connections, vents or any other likely source of spillage. Use as many secondary containers as are practical, or as are required per the published field operating procedures.

8) Upon starting the transfer of liquids, keep line of sight with operator and/or all connections, hoses, vents or any other likely source of spillage. Be prepared to stop proceedings if any leak is noticed. Do not attempt to repair a leaking situation while fluid is being transferred. Stop operations to fix leaks.

9) Maintain a constant line-of-sight with critical components throughout the transfer. Transfer operations must not be left unattended.

10) After transfer is complete, take every precaution while breaking connections. Secondary containment and absorbent pads must continue to be used until the rigging down process is complete.

11) Check all tank and container levels after each transfer for signs of spills. Immediately report all spills to the Field Environmental group in your area.

APPENDIX B

POINT THOMSON REGULATED TANKS LISTS

TABLE B-3
POINT THOMSON REGULATED (USEPA ONLY) STATIONARY CONTAINER DATA
TANKS LESS THAN 10,000 GALLONS

TANK NO. TAG	DESCRIPTION	LOCATION	FABRICATION INSTALLATION DATE	CONSTRUCTION STANDARD	NOMINAL DESIGN CAPACITY	PRODUCT TYPE	SECONDARY CONTAINMENT VOLUME	SECONDARY CONTAINMENT DESCRIPTION	INFLOW CONTROL VALVE	LIQUID LEVEL MECHANISM/OVERFILL PROTECTION	LEAK DETECTION SYSTEMS AND/OR PROCEDURES	COMMENTS
With camp package	Camp back-up emergency generator day tank	Man-camp Central Pad	2005 (estimated)	TBD	TBD	Diesel	None	N/A	Manual [Note 2]	Local level indication	Visual surveillance	
With generator package in sub-base	CPF essential generator day tank	CPF Pad	2005 (estimated)	Non API	10 bbl	Diesel	None	N/A	Manual [Note 2]	Local level indication	Visual surveillance	
With generator package in sub-base	CPF essential generator day tank	CPF Pad	2005 (estimated)	Non API	10 bbl	Diesel	None	N/A	Manual [Note 2]	Local level indication	Visual surveillance	
With generator package in sub-base	CPF essential generator day tank	CPF Pad	2005 (estimated)	Non API	10 bbl	Diesel	None	N/A	Manual [Note 2]	Local level indication	Visual surveillance	
With firewater pump package	CPF diesel engine firewater pump day tank	CPF Pad	2005 (estimated)	UL 142	3 bbl	Diesel	Double wall tank construction	N/A	Manual [Note 2]	Local level indication	Visual surveillance	
TBD	Drilling Mud Tank 2A	Mud Plant Central Well Pad	2005 (estimated)	API 650	175 bbl	Drilling mud solution [Note 1]	Tanks located in mud processing area	Dike/liner	Manual	Local level indication	Visual surveillance	MI Drilling design; housed on grade
AIR STRIP	Possible Jet Fuel Storage Tank Vertical/skid	Air Strip	2005 (estimated)	API 650	20 bbl	Jet-A Aviation Fuel	See Note 3	Impermeable liner supported by timbers	Manual	Visual observation	Visual surveillance	
CPF PAD	Snow melt storage tank vertical/skid	Grind & Inject Facility	2006 (estimated)	Non API	100 bbl	Contaminated water	See Note 3	Impermeable liner supported by timbers	Manual	Visual observation	Visual surveillance	
TBD	Drilling Mud Tank 2B	Mud Plant Central Well Pad	2006 (estimated)	API 650	175 bbl	Drilling mud solution [Note 1]	Tanks located in mud processing area	Dike/liner	Manual	Local level indication	Visual surveillance	MI Drilling design; housed on grade

Notes:

1 May contain synthetic oils from drilling opeations
2 Manual fill valve from truck loading line
3 Secondary containment will be provided for the largest single container plus sufficient freeboard for precipitation.
bbl Barrels
CPF Central Processing Facility
Does not include totes used for chemicals.

APPENDIX C

OIL POLLUTION ACT OF 1990 (OPA 90) ADDENDUM

U.S. Environmental Protection Agency (EPA)

U.S. Department of Transportation (DOT)

U.S. Coast Guard (USCG)

U.S. ENVIRONMENTAL PROTECTION AGENCY

POINT THOMSON
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

CROSS REFERENCE TO
U.S. ENVIRONMENTAL PROTECTION AGENCY
[40 CFR 112, APPENDIX F]

REGULATION SECTION (Appendix F)	SECTION TITLE	PLAN SECTION NUMBER
1.1	**Emergency Response Action Plan 112.20 (h)(1)**	**Section 1.1; Tables 1-1A and 1-1B**
1.1.1	Qualified Individual Information	EPA Information Summary; Section 1.2.3; Table 1-2
1.1.2	Emergency Notification Phone List	Section 1.2; Table 1-2
1.1.3	Spill Response Notification Form	Section 1.2; Figure 1-3
1.1.4	Response Equipment List and Location	Section 3.6; Table 3-11
1.1.5	Response Equipment Testing and Deployment	Sections 1.5 and 3.6.2
1.1.6	Facility Response Team	Sections 1.1 and 1.2
1.1.7	Evacuation Plan	Maintained on-site at facility
1.1.8	Immediate Actions	Sections 1.1 and 1.2
1.1.9	Facility Diagram	Section 1.8
1.2	**Facility Information 112.20 (h)(2)**	**EPA Response Plan Cover Sheet; Section 3.1**
1.2.1	Facility Name and Location	EPA Response Plan Cover Sheet and Information Form; Section 3.1
1.2.2	Latitude and Longitude	EPA Response Plan Cover Sheet; ACS *Technical Manual, Volume 2*, *Map Atlas*
1.2.3	Wellhead Protection Area	Not Applicable
1.2.4	Owner/Operator	Section 3.1
1.2.5	Qualified Individual	EPA Information Summary; Section 1.2.3; Table 1-2
1.2.6	Date of Oil Storage Start-up	Section 3.1.2
1.2.7	Current Operation	Section 3.1.4
1.2.8	Dates and Type of Substantial Expansion	Not Applicable
1.3	**Emergency Response Information 112.20 (h)(3)**	**Sections 1.1, 1.2, 3.3, 3.8, and 3.9**
1.3.1	Notification	Sections 1.1, 1.2, and 3.3
1.3.2	Response Equipment List	Section 3.6; Table 3-11
1.3.3	Response Equipment Testing/Deployment	Sections 1.5 and 3.6

POINT THOMSON
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

CROSS REFERENCE TO
U.S. ENVIRONMENTAL PROTECTION AGENCY
[40 CFR 112, APPENDIX F] (CONTINUED)

REGULATION SECTION (Appendix F)	SECTION TITLE	PLAN SECTION NUMBER
1.3.4	Personnel	Sections 1.5.2, 3.3, 3.8, and 3.9
1.3.5	Evacuation Plans	Maintained on-site at facility
1.3.6	Qualified Individual's Duties	Sections 1.2.3
1.4	**Hazard Evaluation 112.20 (h)(4)**	
1.4.1	Hazard Identification	Sections 2.3 and 2.4
1.4.2	Vulnerability Analysis	Section 3.10
1.4.3	Analysis of the Potential for an Oil Spill	Section 2.3
1.4.4	Facility Reportable Oil Spill History	Section 2.2
1.5	**Discharge Scenarios 112.20 (h)(5)**	**Section 1.6.14**
1.5.1	Small and Medium Discharges	Section 1.6.14
1.5.2	Worst-Case Discharge	EPA Response Plan Facility Cover Sheet and Information Form; Section 1.6.14
1.6	**Discharge Detection Systems 112.20 (h)(6)**	**Section 2.5**
1.6.1	Discharge Detection by Personnel	Section 2.5
1.6.2	Automated Discharge Detection	Section 2.5
1.7	**Plan Implementation 112.20 (h)(7)**	**Introduction**
1.7.1	Response Resources for Small, Medium, and Worst-Case Spills	Sections 1.6, 3.3, 3.5, 3.6, and 3.9
1.7.2	Disposal Plans	Sections 1.6.10 and 1.6.14
1.7.3	Containment and Drainage Planning	Sections 1.6.6, 1.6.14, and 3.2
1.8	**Self-Inspection, Training, Meeting Logs 112.20 (h)(8)**	**Section 3.9**
1.8.1	Facility Self-Inspection	Section 2.5.5
1.8.1.1	Tank Inspection	Section 2.5.5
1.8.1.2	Response Equipment Inspection	Section 3.6.2
1.8.1.3	Secondary Containment Inspection	Sections 2.1.11 and 2.5.5
1.8.2	Facility Drills/Exercises	Section 3.9
1.8.2.1	Qualified Individual Notification Drill Logs	Section 3.9
1.8.2.2	Spill Management Team Tabletop Exercise Logs	Section 3.9
1.8.3	Response Training	Section 3.9
1.9	**Diagrams 112.20 (h)(9)**	**Section 1.8**
1.10	**Security 112.20 (h)(10)**	**Section 2.1.4**

U.S. ENVIRONMENTAL PROTECTION AGENCY

RESPONSE PLAN COVER SHEET

GENERAL INFORMATION

Owner/Operator of Facility: Exxon/Mobil Corporation

Facility Name: Point Thomson Gas Cycling Project

Facility Address (street address or route): 3301 C Street, Suite 400

The Point Thomson Unit is located on the North Slope of Alaska.

City, State, and U.S. Zip Code Anchorage, AK 99519-6601 (Mailing address)

Facility Phone No.: (907) 561-5331

Latitude (Degrees: North): 70º 08' to 70º 11'

Longitude (Degrees: West): 146º 04' to 146º 32'

Dun & Bradstreet Number: 00-121-3214

Standard Industrial Classification (SIC) Code: 1330

Largest Aboveground Oil Storage Tank Capacity (Gallons): 525,000

Maximum Oil Storage Capacity (Gallons): total volume of tanks

Number of Aboveground Oil Storage Tanks: 24

Worst-Case Oil Discharge Amount (Gallons):

525,000 gallon tank +42,697,410 gallons from blowout = 43,222,410 gallons

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

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Facility Name: Point Thomson

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

CERTIFICATION

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

Signature:_____

Name (Please type or print): Randy F. Buckley

Title: Project Manager

Date:_____

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. EPA INFORMATION SUMMARY

Name and Address of Operator

ExxonMobil
3301 C Street, Suite 400
Anchorage, AK 99503

P.O. Box 196601
Anchorage, AK 99519
(907) 561-5331

Name and Telephone Number of Qualified Individual

The Qualified Individuals information will be updated prior to construction activities.

Primary
Chris Faulk
Production Field Superintendent
800 Bell Street
Houston, TX 77002
(713) 656-3986

Alternate
Chuck McClain
Production Operations Superintendent
800 Bell Street
Houston, TX 77002
(713) 656-3703

Worst-Case Discharge

The worst-case discharge (WCD) for a well is calculated using the method outlined in 40 CFR 112, Appendix D, Attachment D-1, Method B2, for wells deeper than 10,000 feet. The well blowout discharge is estimated at 27,000 barrels per day (bpd) of gas condensate for the first 2 hours when the well is ignited. After Hour 2 (0.083 day), the well is ignited, removing 26,973 bpd (99.9 %) of the oil. Mechanical response actions commence 6 hours (0.25 day) after the blowout, resulting in an additional 5,332 bpd of recovery capacity. The equation for calculating the WCD for the well is:

WCD Well = Discharge Volume 1 + Discharge Volume 2

Where:

Discharge Volume 1 = (days unattended + days to respond) x (rate of well)
= (0 day + 0.25 day) x (27,000 bpd)
= 0.25 day x 27,000 bpd = 6,750 bbl

Discharge Volume 2 = [45 days - (days unattended + days to respond)] x (rate of well)
x (rate of well/rate of recovery)
= [45 days - (0 day + 0.25 day)] x (27,000 bpd)
x (27,000 bpd/32,305 bpd)
= (44.75 days x 27,000 bpd x 0.8358) = 1,009,855 bbl

WCD Well = 6,750 barrels + 1,009,855 barrels = 1,016,605 barrels or 42,697,410 gallons

The rate of recovery includes the oil recovery capacities identified in Table 1-44 (5,332 bpd) and the volume of oil removed by ignition (26,973 bpd).

The WCD for the largest tank is 525,000 gallons (12,500 bbl) of diesel.

Combining the two WCDs results in a volume of 43,222,410 gallons of hydrocarbon material.

Basis for Determination of Significant and Substantial Harm

Point Thomson operations will have the potential to spill hydrocarbon material on tundra (wetlands) and into navigable waters of the United States. As such, it is determined to pose significant and substantial harm should a spill occur.

ACS Tactics L-4 and L-8

The Alaska Clean Seas (ACS) *Technical Manual* presents a summary of major spill response equipment which will be available to ExxonMobil on the North Slope through ExxonMobil's contract with ACS. In addition, other spill response equipment will be available through a mutual aid agreement with other North Slope operators.

POINT THOMSON DEVELOPMENT AREA
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

CROSS REFERENCE TO
U.S. ENVIRONMENTAL PROTECTION AGENCY
SPILL PREVENTION, CONTROL AND COUNTERMEASURE REGULATIONS
[40 CFR 112.7 to 40 CFR 112.10]

REGULATION SECTION	SECTION TITLE	PLAN SECTION NUMBER
112.7	**General Requirements for Spill Prevention, Control and Countermeasure (SPCC) Plans**	
112.7(a)(3)	Describe layout of facility and include facility diagram showing location of and contents of each container.	Sections 1.8 and 3.1
112.7(a)(3)(i)	List the type of oil in each container and its capacity.	Appendix B
112.7(a)(3)(ii)	Discharge prevention measures including procedure for routine handling of products.	Sections 2.1.5, 2.1.6, 2.1.8, and 2.5; Appendix A
112.7(a)(3)(iii)	Discharge, procedures or drainage controls such as secondary containment around containers and other structures.	Sections 2.5, 2.1.10, 2.1.11 and this section
112.7(a)(3)(iv)	Countermeasures for discharge discovery, response, and cleanup.	Sections 2.5 and 1.6.14
112.7(a)(3)(v)	Methods of disposal of recovered materials in accordance with applicable legal requirements	Sections 1.6.10 and 1.6.14
112.7(a)(3)(vi)	Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors and all appropriate federal, state and local agencies.	Sections 1.1 and 1.2; Tables 1-1B 1-2, and 1-3
112.7(b)	Prediction of the direction, rate of flow, and total quantity of oil which could be discharged.	Sections 1.6.13, 1.6.14, and 1.8; ACS *Technical Manual, Volume 2, Map Atlas*
112.7(c) and (d)	Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge, OR explain why this is not practicable.	This section and Sections 2.1.5, 2.1.6, 2.1.10, and 2.1.11
112.7(d)(2)	A written commitment of manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged.	Management Approval and Manpower Authorization Form (p. i); Sections 3.5 and 3.6
112.7(e)	Conduct inspection and tests required by this part in accordance with written procedures.	Sections 2.5.5, and 3.6.2; Table 2-2
112.7(f)(1)	Train oil-handling personnel in the operation and procedures, pollution control laws, facility operations, SPCC plan and maintenance of equipment to prevent discharges.	Section 2.1
112.7(f)(2)	Designate a person who is accountable for discharge prevention.	Section 1.1
112.7(f)(3)	Conduct discharge prevention briefings for oil-handling personnel at least once a year.	Section 2.1
112.7(g)(1)	Fully fence each facility handling, processing, or storing oil, and lock and guard entrance gates.	Section 2.1.4

CROSS REFERENCE TO U.S. ENVIRONMENTAL PROTECTION AGENCY SPILL PREVENTION, CONTROL AND COUNTERMEASURE REGULATIONS [40 CFR 112.7 to 40 CFR 112.10] (CONTINUED)

REGULATION SECTION	SECTION TITLE	PLAN SECTION NUMBER
112.7(g)(2)	Ensure that the master flow and drain valves and any other valves have security measures so that they remain in the closed position when not operating.	None; see table entry to the left
112.7(g)(3)	Lock the starter control on each oil pump in the "off" position and locate it at a site accessible only to authorized personnel when not operating.	None; see table entry to the left
112.7(g)(4)	Securely cap the blank-flange of the loading/unloading connections of oil pipelines or facility piping when not in service.	Section 2.1.9
112.7(g)(5)(i) and (ii)	Provide facility lighting commensurate with the type and location of the facility that will assist in the discovery of discharges occurring during darkness hours and prevent discharges occurring from acts of vandalism.	See Section 2.1.4 and Section 3.1 for equivalent environmental protection
112.7(h)(1)	Use quick drainage system for tank car or tank truck loading/unloading areas, designed to hold the maximum capacity of any single compartment of a tank car or tank truck.	Sections 2.1.5 and 2.5; Appendix A
112.7(h)(2)	Provide interlocked warning light or physical barrier system, warning signs, wheel chocks or vehicle brake interlock system in loading/unloading areas to prevent movement.	This section and Section 2.1.5; Appendix A
112.7(h)(3)	Prior to filling or departure of any tank car or tank truck, inspect for discharges on all outlets of vehicles and ensure they are tightened.	Section 2.1.5; Appendix A
112.7(i)	If a field-constructed, aboveground container is repaired or changes service that might affect the risk of a discharge due to brittle fracture, or has discharged due to brittle fracture, evaluate the container for risk of discharge and take appropriate action.	None; see table entry to the left
112.7(j)	Include a complete discussion on conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any more stringent state rules, regulations and guidelines.	This section

CROSS REFERENCE TO U.S. ENVIRONMENTAL PROTECTION AGENCY SPILL PREVENTION, CONTROL AND COUNTERMEASURE REGULATIONS [40 CFR 112.7 to 40 CFR 112.10] (CONTINUED)

REGULATION SECTION	SECTION TITLE	PLAN SECTION NUMBER
112.8	**Spill Prevention, Control and Counter-measure Plan requirements for onshore facilities (excluding production facilities)**	
112.8(b)(3) and (4)	Design facility drainage systems from undiked areas (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoon or catchment basins. If drainage is not engineered as above, equip the final discharge of all ditches inside the facility with a diversion system.	Sections 1.8 and 3.1
112.8(c)(1)	Do not use a container for storage unless it is compatible with the material stored.	Sections 2.1.10
112.8(c)(2)	Construct all bulk storage container installation so secondary containment is provided for the entire capacity of the largest single container with sufficient freeboard for precipitation and is impervious	This section and Sections 2.1.10 and 2.1.11; Appendix B
112.8(c)(6)	Test each aboveground container for integrity on a regular schedule.	Section 2.1.10
112.8(c)(8)(i) through (v)	Engineer or update each container installation with good engineering practices and provide one of the following: high-liquid level alarms, high-liquid level pump cutoff device, direct audible or code communication, fast response system for determining the liquid level of each bulk storage container, or regularly test liquid-level devices.	Sections 2.1.10 and 4.8; Appendix B
112.8(c)(10)	Promptly correct visible discharges which result in loss of oil from a container and promptly remove any accumulations of oil in diked areas.	Sections 2.1.5 and 2.1.6
112.8(d)(1)	Provide buried piping installed or replaced after August 16, 2002 with protective wrapping and coating.	Sections 2.1.9 and 4.9
112.8(d)(2)	Cap or blank-flange terminal connection at the transfer point and mark it as to origin when piping is not in service.	Sections 2.1.6 and 2.1.9
112.8(d)(3)	Properly design pipe supports to minimize abrasion and corrosion and allow expansion and contraction.	Section 2.1.9
112.8(d)(4)	Regularly inspect all aboveground valves, piping, and appurtenances.	Section 2.1.9; Table 2-2
112.8(d)(5)	Warn vehicles entering the facility so that vehicles will not endanger aboveground piping	Section 2.1.9

CROSS REFERENCE TO U.S. ENVIRONMENTAL PROTECTION AGENCY SPILL PREVENTION, CONTROL AND COUNTERMEASURE REGULATIONS [40 CFR 112.7 to 40 CFR 112.10] (CONTINUED)

REGULATION SECTION	SECTION TITLE	PLAN SECTION NUMBER
112.9	**Spill Prevention, Control and Counter-measure Plan requirements for onshore oil production facilities**	
112.9(c)(1)	Do not use a container for the storage of oil unless material and construction are compatible.	Section 2.1.10; Appendix B
112.9(c)(2)	Provide secondary containment for entire capacity of largest single container and sufficient freeboard.	Section 2.1.11; Appendix B
112.9(c)(3)	Periodically, and upon regular schedule, visually inspect each container for deterioration and maintenance needs.	Section 2.1.10; Table 2-2; Appendix B
112.9(c)(4)(i)	Container capacity is adequate to assure container will not overfill if pumper/gauger is delayed in making regularly scheduled rounds.	Section 4.8; Appendix A; this table entry
112.9(c)(4)(ii)	Overflow equalizing lines between containers so that full container can overflow into adjacent container.	Not Applicable
112.9(c)(4)(iii)	Vacuum protection is adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.	This table entry
112.9(c)(4)(iv)	High-level sensors generate and transmit an alarm signal to the computer where facility is subject to computer production control system.	Appendix B
112.9(d)(1)	Periodically, and upon regular schedule, inspect all aboveground valves and piping associated with transfer operations.	Table 2-2
112.9(d)(3)	Point Thomson has a program of flowline maintenance to prevent discharges.	Sections 2.1.8 and 2.1.9

SPCC Conformance Discussion

General Conformance. The facility's general conformance with the Title 40, Code of Federal Regulations Part 112 requirements is discussed in this section. A complete discussion of conformance with the applicable federal and state regulations for oil spill prevention and containment as required by 40 CFR 112.7(j) is provided in the Oil Discharge Prevention and Contingency Plan (plan). For prevention procedures, see Sections 2 and 4 in particular, including documents incorporated by reference into the plan. For spill containment tactics, see Sections 1, 2, 3, and 4 of the plan. The plan shows how the generally more stringent state oil spill prevention and containment regulations are met.

The facility will conform with the requirements of Parts 112.3 to 112.9 that apply to it as an onshore, non-transportation-related, oil production and non-production facility.

Spill Trajectories. The oil spill trajectory of each type of potential major spill has been anticipated, as required by 40 CFR 112.7(b). The quantities of the potential spills are equal to capacities of the containers. See the simulated oil spill volume calculations for federal worst-case discharges in the OPA 90 sections and for state Response Planning Standards in Section 1.6.13. Also see the discharge analysis table in Section 2 of the plan. The pad diagrams in Section 1.8 of the plan and ACS *Technical Manual*, *Volume 2*, Map Atlas provide surface drainage diagrams that illustrate potential spill paths. The atlas is incorporated into the SPCC plan by reference.

Spills from most fixed tanks will be confined by facility module floors and their spill drainage systems or by outdoor, lined-and-diked areas. At loading areas, spills will move across gravel pads toward dikes.

Oil pipelines can spill oil to gravel pads, tundra, or streams. The trajectories would spread from the pipeline rupture, moving down-slope or taking the form of aerial spray. Large ruptures could spill the quantity of oil from between valves minus the oil retained in the piping by terrain effects.

Fueling Areas. At tank truck loading/unloading areas, transfers of fuel will follow Slope-wide standard operating procedures (see Appendix A of the plan). The procedures have been found very effective in reducing spills at loading racks under conditions and with the equipment characteristic of the Alaska North Slope. The result of the fuel transfer procedures is spill prevention protection equivalent to the vehicle departure cautions described in 40 CFR 112.7(h)(2). For more details, see the discussions of fuel loading/unloading areas in Section 2.

Mobile Tanks Less than 660 Gallons. Fixed surface dikes and curbing for small, mobile oil tanks that are frequently moved among sites near water will not be provided because they are not practicable. For example, bleed trailers, light plants and heaters will be pulled from well to well as part of well-servicing operations. Short-term dikes, berms, and walls are generally not feasible because of the limited time the tank would be on location and the limited available space on the gravel pad. Furthermore, surface structures, including drainage systems and barriers, would pose hazards to other traffic.

However, most small mobile tanks will have built-in curbing or trays to contain spills. The curbing will meet the containment requirement in Part 112.7. The tanks will be visually inspected for deterioration and maintenance needs as required by Part 112.9(c)(3). The tanks will not be required by SPCC regulations to undergo integrity tests, although they will undergo testing, or to have secondary containment such as fixed surface dikes and curbing with capacity equal to the container.

Spills from drums and small tanks that are set back from the pad edge are expected to be retained in gravel pads and not reach water. Small tanks with neither built-in nor ground curbing, e.g., Tioga heaters, will be placed on gravel pads well away from the edge. The gravel provides sorbency [(Part 112.7(c)(vii))] and catchment [Parts 112.8(c)(2) and 112.9(c)(2)] and retains the spill before it reaches water. For example, spills of 660 gallons will be expected to spread over approximately 1,320 square feet at the rate of up to one-half gallon per square foot. That rate assumes 3 foot gravel depth and 5% available porosity, reduced by half to account for ice and water [(27 cubic feet per cubic yard x 0.05 void space x 7.5 gallons

per cubic foot / 9 square feet surface per cubic yard) x 0.5 for water and ice = 0.56 gallon per square foot]. Twenty feet is the radius of such a spill if it spreads as a circle.

Deviation from Secondary Containment. Oil spill prevention is provided for pipelines and some small tanks as described in Part 112.7(d) rather than by secondary containment methods described in Part 112.7(c)(2).

Pipelines. Secondary containment systems described in Part 112.7(c)(2) are not practicable for oil pipelines outside of modules. Oil pipelines form networks of hundreds of miles on the North Slope. The pipelines are elevated above tundra, ponds and streams. The surfaces beneath the pipelines are not suitable for secondary containment systems. Accumulations of ice and snow, and the effects of high winds and seasonal flooding, generally preclude the long-term use of surface structures other than gravel pads or metal pilings. Secondary containment structures for pipelines above gravel pads would be subject to similar ice, snow, and wind effects as well.

Pipelines will be inspected and maintained to prevent oil spills to tundra and water as described in Sections 2 and 4 of the plan.

Mobile Tanks. Those mobile bulk storage containers that might spill from the pad edge to water, and will not have the prevention systems described in Part 112.7(c) instead will receive periodic integrity testing. Their associated piping and valves will receive periodic testing of integrity and leaks in accordance with Part 112.7(d). The tanks will be managed under a comprehensive integrity management program carried out by ExxonMobil's corrosion engineers group. The testing will follow standard operating procedures developed and implemented by the facility's corrosion inspectors and field surveillance teams. The inspections, tests, and records will follow Part 112.7(e) requirements. Furthermore, the facility will have an oil spill contingency plan and a written commitment for spill response as described in Parts 112.7(d)(1) and (2). The inspection alternative that will be applied to mobile tanks, as well as to pipelines as described above, complies with the deviation requirements of Parts 112.7, 112.8 and 112.9 for preventing spills from reaching water.

Liquid Level Determination. Liquid level determination for mobile tanks at non-production facilities, required by Part 112.8(c)(8), will be conducted by the voice and signal method described in Part 112.8(c)(8)(iii). See the liquid level determination best available technology discussion in Section 4 of the plan. At production facilities, small tank overfill protection will be provided by adequate container capacity relative to the pumper's schedule as described in Part 112.9(c)(4)(i). For more details, see the overfill protections list in the plan appendices.

U.S. DEPARTMENT OF TRANSPORTATION

POINT THOMSON
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

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

REGULATION SECTION (49 CFR)	SECTION TITLE	PLAN SECTION
194.103	**Significant and Substantial Harm; Operator's Statement**	
(a)	Identification of line sections that might cause significant and substantial harm to the environment in the event of a discharge	DOT Information Summary
194.105	**Worst-Case Discharge**	
(a)	The worst-case discharge and the methodology, including calculations, used to arrive at the volume	DOT Information Summary
194.107	**General Response Plan Requirements**	
(a)	Resources for responding, to the maximum extent practicable, to a worst-case discharge and to the substantial threat of such a discharge	Sections 1.6 and 3.5 through 3.10
(c)	Certification that the response plan is consistent with the National Contingency Plan (NCP)	Page DOT-3
(d)(1)(i)	Information summary as required by 194.113	DOT Consistency Certification and DOT Information Summary
(d)(1)(ii)	Immediate notification procedures	Sections 1.1, 1.2, and 3.3
(d)(1)(iii)	Spill detection and mitigation procedures	Section 2.5
(d)(1)(iv)	Name, address, and telephone number of oil spill response organization	Table 1-2
(d)(1)(v)	Response activities and response resources	Sections 1.1, 1.2, 1.5, 1.6, 3.3, and 3.6
(d)(1)(vi)	Names and telephone numbers of federal, state, and local agencies with pollution control responsibilities or support	Section 1.2; Table 1-3
(d)(1)(vii)	Training procedures	Sections 2.1.1 and 3.9
(d)(1)(viii)	Equipment testing	Section 3.6.2
(d)(1)(ix)	Drill types, schedules, and procedures	Section 3.9
(d)(1)(x)	Plan review and update procedures	Introduction
(d)(2)	Response zone appendices	Not Applicable

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. DOT CERTIFICATION OF PREPAREDNESS

CERTIFICATE OF RESPONSE PREPAREDNESS FOR POINT THOMSON

EXXONMOBIL
POINT THOMSON CONDENSATE EXPORT PIPELINE

Pipeline Response Plans Officer
Research and Special Programs Administration
U.S. Department of Transportation
Room 2335
400 Seventh Street, SW
Washington, DC 20590

ExxonMobil hereby certifies to the Research and Special Programs Administration of the DOT that it has identified, and ensured by contract, or other means to be approved by the Research and Special Programs 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.

_____ _____

Randy F. Buckley Date
Project Manager
ExxonMobil Development Company, on behalf of Exxon Mobil Corporation

This Certification of Response Preparedness was acknowledged before me on_____, by _____ on behalf of said corporation.

_____

My commission expires _____

THIS PAGE INTENTIONALLY LEFT BLANK

ACP/NCP CONSISTENCY CERTIFICATION FOR POINT THOMSON

EXXONMOBIL
POINT THOMSON CONDENSATE EXPORT PIPELINE

ExxonMobil hereby certifies to the Research and Special Programs Administration of the DOT that it has reviewed the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACPs) and found the Point Thomson ODPCP to be consistent with them. The NCP/ACPs reviewed include the NCP as set forth in 40 CFR 300 as published in Federal Register Volume 59, No. 178, Final Rule, September 15, 1994, and the Alaska Federal/State Unified Preparedness Plan ACP (The Unified Plan), Volume I and Volume II (North Slope Borough), dated September 1999.

_____

Randy F. Buckley
Project Manager
ExxonMobil Development Company,
on behalf of Exxon Mobil Corporation

_____

Date

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. DOT INFORMATION SUMMARY

Name and Address of Operator

ExxonMobil
P.O. Box 196601
Anchorage, AK 99519
(907) 561-5331

Street Address:
3301 C Street, Suite 400
Anchorage, AK 99503
Fax: (907) 564-3789

Response Zone Description

Point Thomson consists of a single response zone containing the Point Thomson condensate export pipeline that runs from the Point Thomson Central Processing Facility (CPF) to the Badami pipeline, located in the North Slope Borough of Alaska.

Name and Telephone Number of Qualified Individual

The Qualified Individuals information will be updated prior to construction activities.

Primary
Chris Faulk
Production Field Superintendent
800 Bell Street
Houston, TX 77002
(713) 656-3986

Alternate
Chuck McClain
Production Operations Superintendent
800 Bell Street
Houston, TX 77002
(713) 656-3703

Worst-Case Discharge

In accordance with 49 CFR 194.105(b)(1), the worst-case discharge (WCD) for the pipeline is equal to the pipeline's maximum release time (RT_{max}) in hours plus the maximum shutdown response time (ST_{max}) in hours multiplied by the maximum flow rate (F_{max}) expressed in barrels per hour (bph) (based on maximum daily capacity of the pipeline) plus the largest pipeline drainage volume (PV_{max}) after shutdown of the line section(s) in the response zone expressed in barrels or:

$WCD = [(RT_{max} + ST_{max}) * F_{max}] + PV_{max}$
WCD = 16,899 bbl condensate

Where:

RT_{max} = 0.05 hours (3minutes)
ST_{max} = 0.083 hours (5 minutes)
F_{max} = 4167 bph (100,000 barrels of oil per day [bopd] / 24 hours per day [hpd])
PV_{max} = 16,345 bbl condensate = [((12.75-inch outside diameter – 2 x 0.28-inch (wall thickness) / 2)^2 x 3.14) / 144 square inches per square foot] /(5.6 cubic foot / bbl) x (21.4 miles) x (5280 ft/mile) = 16,345 bbl

Therefore:

WCD = [(0.05 + 0.083)*4167] + 16,345 = 16,899 bbl of condensate

Time to detect a leak and to shut in the pipeline is not affected by adverse weather.

Description of the Line Sections

The condensate export pipeline will be 22 miles in length running between valves at the CPF and Badami Development Area.

Basis for Determination of Significant and Substantial Harm

The condensate export pipeline will run across several streams and over wetlands. As such, it is determined to pose significant and substantial harm should a spill occur.

Certification of Response Personnel and Equipment

Sufficient response personnel and equipment will be available to respond to a WCD or threat of such a discharge. Information is provided in Sections 1.6.14, Response Scenarios; 3.5, Logistical Support; 3.6, Response Equipment; and 3.8, Response Contractor Information.

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 ExxonMobil's "Point Thomson USDOT Operations Manual", Part III, Abnormal Operations. The Point Thomson condensate export pipeline will cross several small streams and wetlands to the Badami Development Area pipeline tie-in. According to the requirements of 49 CFR 194.103, and the definitions in 49 CFR 194.103(c)(5) this line section can be expected to cause significant and substantial harm to the environment in the event of a discharge of condensate.

U.S. COAST GUARD

POINT THOMSON
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

CROSS REFERENCE TO U.S. COAST GUARD RESPONSE PLAN REQUIREMENTS [33 CFR 154.1035]

REGULATION SECTION (33 CFR 154.1035)	SECTION TITLE	PLAN SECTION
(a)	**Introduction and Plan Content**	
(a)(1)	Facility name, address, telephone and fax numbers, mailing address	Introduction; Section 1.1
(a)(2)	Facility's geographic location	Sections 1.8 and 3.1
(a)(3)	24-hour procedure for contacting facility owner or operation	Sections 1.1 and 1.2
(a)(4)	Table of contents	Table of Contents
(a)(5)	Cross-index	This section
(a)(6)	Record of changes	Page iii
(b)	**Emergency Response Action Plan**	
(b)(1)	Notification procedures	Sections 1.1 and 1.2
(b)(1)(i)(A)	Facility response personnel, the spill management team, Oil Spill Removal Organization (OSRO), and the qualified individual(s) and the designated alternate(s)	Sections 1.1, 1.2, and 1.5; Table 1-2
(b)(1)(i)(B)	Government agencies	Table 1-3; Section 1.2.2
(b)(1)(ii)	Notification form	Section 1.2; Figure 1-3
(b)(2)	Facility's Spill Mitigation Procedures	This section; Sections 1.6, 2.1 and 2.5; Appendix A
(b)(2)(i)(A)	Average most probable discharge	This section
(b)(2)(i)(B)	Maximum most probable discharge	This section
(b)(2)(i)(C)	Worst-case discharge	This section
(b)(2)(i)(D)	Worst-case discharge from non-MTR portion of facility	This section and Section 1.6.14
(b)(2)(ii)	Mitigation or prevention procedures for discharges or threat of discharge	Sections 1.6, 2.1, 2.3, and 2.5; Appendix A
(b)(2)(ii)(A)	Failure of manifold, loading arm, hoses, other	Appendix A
(b)(2)(ii)(B)	Tank overfill	Sections 2.1.10 and 2.5
(b)(2)(ii)(C)	Tank failure	Sections 1.6.14 and 2.5
(b)(2)(ii)(D)	Piping rupture	Sections 1.6.14, 2.5 and 2.1.8
(b)(2)(ii)(E)	Piping leak	Sections 1.6.1, 2.1.8, and 2.5
(b)(2)(ii)(F)	Explosion or fire	Section 1.6.2
(b)(2)(ii)(G)	Equipment failure	Section 1.6.1

CROSS REFERENCE TO
U.S. COAST GUARD RESPONSE PLAN REQUIREMENTS
[33 CFR 154.1035] (CONTINUED)

REGULATION SECTION (33 CFR 154.1035)	SECTION TITLE	PLAN SECTION
(b)(2)(iii)	List of equipment and responsibilities for mitigation of average most probable discharge	Sections 1.1, 2.1.5, and 3.6; Appendix A
(b)(3)	Facility Response Activities	Sections 1.1 and 1.2
(b)(3)(i)	Facility personnel's responsibilities to initiate and supervise response pending arrival of Qualified Individual	Sections 1.1, 1.2, and 3.3
(b)(3)(ii)	Qualified Individual's responsibility and authorities	Sections 1.1 and 1.2
(b)(3)(iii)	Organizational structure to manage response actions	Sections 1.1, 1.2, and 3.3
(b)(3)(iv)	Oil spill removal organization(s) and spill management team capabilities	Tables 1-1B and 1-2; Sections 3.8 and 3.9
(b)(3)(iv)(A)(1)	Provide equipment and supplies for average most probable discharge	Section 3.6
(b)(3)(iv)(A)(2)	Trained personnel for 7 days	Sections 3.5 and 3.9
(b)(3)(iv)(B)	Job descriptions for each spill management team member within the organization structure	Sections 1.1 and 1.2
(b)(4)	Fish and wildlife and sensitive environments	Sections 1.6.5, 1.6.11, 1.6.14, and 3.2
(b)(4)(i)	Identification of environmentally sensitive areas potentially impacted by a worst-case discharge	Sections 1.6.5 and 1.6.14
(b)(4)(ii)(A)	List of sensitive areas potentially impacted by a worst-case discharge	Sections 1.6.14 and 3.2
(b)(4)(ii)(B)	Procedures to protect sensitive areas	Sections 1.6.14 and 3.2
(b)(4)(ii)(C)	Depict response actions on map	Section 1.6.14
(b)(4)(iii)(A)	Personnel and equipment to protect sensitive areas for distance and days per Table 2, Appendix C, 33 CFR 154	Section 1.6.14
(b)(4)(iii)(B)(1)(i)	For persistent oil and non-petroleum oils discharged into non-tidal waters, the distance from the facility traveled in 48 hours at maximum current	Not Applicable
(b)(4)(iii)(B)(1)(ii)	For persistent oil 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.	5 miles on east and west of barge mooring location
(b)(4)(iii)(B)(1)(iii)	For non-persistent oil discharged into non-tidal waters, the distance from the facility traveled in 24 hours at maximum current	Section 3.1; ACS *Technical Manual*, *Volume 2*
(b)(4)(iii)(B)(1)(iv)	For non-persistent oil 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.	5 miles on east and west of barge mooring location
(b)(4)(iii)(B)(2)	Trajectory model (substitute for distance calculation required by [b][4][iii][B][1])	Section 1.6.4
(b)(5)	Disposal plan	Section 1.6.10
(c)	**Training and Exercises**	
(c)(1)	Training procedures	Sections 2.1.1 and 3.9
(c)(2)	Exercise procedures	Section 3.9

CROSS REFERENCE TO
U.S. COAST GUARD RESPONSE PLAN REQUIREMENTS
[33 CFR 154.1035] (CONTINUED)

REGULATION SECTION (33 CFR 154.1035)	SECTION TITLE	PLAN SECTION
(d)	**Plan Review and Update Procedures**	**Introduction**
(e)	**Appendices**	
(e)(1)(i)	Physical description of facility	Section 3.1
(e)(1)(ii)	Identify the sizes, types, and number of vessels that the facility can transfer oil to and from simultaneously	Not Applicable
(e)(1)(iii)	Location of First Valve in Secondary Containment	Section 1.8
(e)(1)(iv)	Information on oil handled, stored, or transported at the facility in bulk	MSDS will be available in the *Fuel Transfer Operations Manual*, maintained at the facility.
(e)(2)	List of contacts	Sections 1.1 and 1.2; Table 1-2
(e)(2)(i)	24-hour contact for Qualified Individual and alternate	Section 1.2.3; Table 1-2
(e)(2)(ii)	24-hour contact for oil spill response organization(s)	Section 1.2; Tables 1-1B and 1-2
(e)(2)(iii)	24-hour contact for agencies	Section 1.2; Table 1-3
(e)(3)(i)	Equipment and Personnel for Response of Average Most Probable Discharge	Sections 1.6.14 and 3.6
(e)(3)(ii)	Equipment list belonging to OSRO to respond to a most probable or worst-case discharge	Section 3.6 and ACS *Technical Manual*, *Volume 1*, Tactic L-6
(e)(3)(iii)	If OSRO has been classified by USCG, equipment list is not required but classification must be noted	Section 3.6
(e)(4)	Communications Plan	Section 1.4
(e)(5)	Site-specific Health and Safety Plan	ACS *Technical Manual*, *Volume 2*, Tactics S1 to S6.
(e)(6)	List of Acronyms and Definitions	Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK

POTENTIAL DISCHARGES

Average Most Probable Discharge

The average most probable discharge is calculated as approximately 0.6 bbl of diesel fuel, based on the definition contained in 33 CFR 154.1020 (the lesser of 50 bbl or 1% of the volume of the WCD).

Maximum Most Probable Discharge

The maximum most probable discharge is 5.7 bbl of diesel fuel, based on the definition contained in 33 CFR 154.1020 (the lesser of 1,200 bbl or 10 % of the volume of the WCD).

Worst-Case Discharge

In accordance with 33 CFR 154.1029(b)(2), the WCD for piping between the marine transfer manifold and the non-transportation-related portion of the facility is equal to the pipeline's maximum release time (RT_{max}) in minutes; plus the maximum shutdown response time (ST_{max}) in minutes; multiplied by the maximum flow rate (F_{max}) expressed in barrels per minute; plus the largest line drainage volume (PV_{max}), expressed in barrels, for the pipe or hose between the marine manifold and the non-transportation-related portion of the facility:

$$WCD = [(RT_{max} + ST_{max}) * F_{max}] + PV_{max}$$
$$WCD = 57.25 \text{ bbl diesel}$$

Where:

RT_{max} = 2 minutes
ST_{max} = 0.5 minutes
F_{max} = 10.5 bbl per minute
PV_{max} = 31 bbl (based on 2,000 feet of 4-inch diameter hose)

Therefore, the WCD is:

[(2 min + 0.5 min)*10.5bbl/min] + 31 bbl = 57.25 bbl of diesel oil