



XTO Energy Inc.
Cook Inlet Middle Ground Shoal Facilities
(Platforms A and C, Marine Flowlines and Onshore Facility)

**OIL DISCHARGE PREVENTION
AND CONTINGENCY PLAN**

C-PLAN

Revision 3
January 2014



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
INDUSTRY PREPAREDNESS PROGRAM
Exploration, Production and Refineries

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.3094
Fax: 907.269.7687

January 31, 2014

File No.: 305.30
(XTO Energy)

Ryan Tunseth
EHS Coordinator
XTO Energy, Inc.
52260 Wik Road
Kenai, AK 99611

Subject: **XTO Energy, Inc., Cook Inlet Middle Ground Shoal Oil Discharge Prevention and Contingency Plan. Plan Number 11-CP-2059; Minor Amendment Approval – Revision 3**

Dear Mr. Tunseth:

The Alaska Department of Environmental Conservation (department) has reviewed the January 27, 2014 application for amendment of the above-referenced Oil Discharge Prevention and Contingency Plans (plan). The amendment application was submitted in accordance with 18 AAC 75.415.

The approved changes are as follows:

- Revisions to Distribution List
- Updates to Table 2.1-2, Middle Ground Shoal Oil Storage Tank Inspection Schedule
- Updates to Reflect Response Contractor Name Change (Witt O'Brien's)
- Updates to Incident Command System (ICS) Personnel Contact Information Listings

The changes associated with this amendment do not diminish XTO Energy, Inc.'s response capability. The department approves the amendment as submitted in accordance with 18 AAC 75.415(f). The revised pages must be distributed to all control copies of the plan. All terms and conditions of the department's letter of approval and the existing Certificate of Approval remain in effect. The expiration date of this amendment coincides with the existing plan approval.

APPEAL: This is a final decision. Aggrieved persons with standing may appeal this decision to the Alaska Superior Court within 30 days as provided by the Alaska Rules of Appellate Procedure.

Ryan Tunseth
XTO Energy, Inc.

2

January 31, 2014

If you have any questions, please contact me at (907) 269-7680 or Eugene Cataldi at (907) 269-3060 or eugene.cataldi@alaska.gov.

Sincerely,



Graham Wood
Section Manager

Electronic cc:

Steve Russell, ADEC
C-plan Reviewer, ADNRR
Bradley Dunker, ADFG
Matt Carr, USEPA
Christy Bohl, BSEE
USCG, Western Alaska Facilities
USCG Sector - Homer Detachment
David Lehman, USDOT
Allison Iversen, SPCO
Jason Walsh, SPCO
Vinnie Catalano, CIRCAC
Tom Dearlove, KPB
Todd Paxton, CISPRI
Joan Yeager, CISPRI
William Stillings, Witt O'Brien's



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental
Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
INDUSTRY PREPAREDNESS PROGRAM
Exploration, Production and Refineries

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.3094
fax: 907.269.7687

March 15, 2013

File No.: 305.30
(XTO Energy)

Ryan Tunseth
EHS Coordinator
XTO Energy, Inc
52260 Wik Road
Kenai, AK 99611

Subject: **XTO Energy, Inc., Cook Inlet Middle Ground Shoal Oil Discharge Prevention and Contingency Plan, North Slope Alaska. Plan Number 11-CP-2059; Minor Amendment Approval – Revision 2**

Dear Mr. Tunseth:

The Alaska Department of Environmental Conservation (department) has reviewed the application for amendment of the subject Oil Discharge Prevention and Contingency Plans (plan) dated March 12, 2013. The amendment application was submitted in accordance with 18 AAC 75.415.

The amendment updates information regarding XTO Energy's (XTO) response notifications and contacts as well as the specific changes listed below:

- Updates to emergency contact notifications in Part 1 and Appendix B;
- Primary response action contractor (PRAC) equipment upgrades incorporated into spill scenarios in Section 1.8;
- Facility drainage diagram, Figure 2.1-6;
- Updates to reflect changes to the Facility Flow Diagram, Figure 3.2-1.

The changes associated with this amendment do not diminish XTO's response capability. The department approves the minor amendments as submitted in accordance with 18 AAC 75.415(f). The revised pages must be distributed to all control copies of the plan. All terms and conditions of the department's letters of approval and the existing Certificates of Approval remain in effect. The expiration dates of these amendments coincide with the existing plan approvals.

APPEAL: This is a final decision. Aggrieved persons with standing may appeal this decision to the Alaska Superior Court within 30 days as provided by the Alaska Rules of Appellate Procedure.

If you have any questions, please do not hesitate to contact me at (907) 269-7541 or shannon.dewandel@alaska.gov.

Ryan Tunseth
XTO Energy, Inc.

2

March 15, 2013

Sincerely,



Shannon DeWandel
Environmental Program Specialist

Electronic cc:

Graham Wood, ADEC
Laurie Silfven, ADEC
Bradley Dunker, ADFG
C-Plan Reviewer, ADNRC
Matt Carr, USEPA
Steve Russell, ADEC
Steve Catalano, CIRCA
LCDR Daniel Buchsbaum, USCG - Anchorage
Lt. Sarah Geoffrion, USCG - Homer
MSTC Shawn Erwin, USCG - Anchorage
MST1 Brian Schughart, USCG - Anchorage
Christy Bohl, BSEE
Tom Dearlove, KPB
Legal Director, Trustees of Alaska
Bob Shavelson, Cook Inletkeeper
Hal Shepherd, Center for Water Advocacy
Clara Crosby, UIC Umiaq



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental
Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
INDUSTRY PREPAREDNESS PROGRAM
Exploration, Production and Refineries

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.3094
fax: 907.269.7687

January 16, 2013

File No.: 305.30
(XTO Energy)

Ryan Tunseth
EHS Coordinator
XTO Energy, Inc
52260 Wik Road
Kenai, AK 99611

Subject: **XTO Energy, Inc., Cook Inlet Middle Ground Shoal Oil Discharge Prevention and Contingency Plan, North Slope Alaska. Plan Number 11-CP-2059; Minor Amendment Approval – Revision 1**

Dear Mr. Tunseth:

The Alaska Department of Environmental Conservation (department) has reviewed the application for amendment of the subject Oil Discharge Prevention and Contingency Plans (plan) dated November 7, 2012. The amendment application was submitted in accordance with 18 AAC 75.415.

The amendment updates information regarding XTO Energy's (XTO) new surge tanks:

- Revisions to core plan with administrative changes and diagrams.
- Updated Section 1.6, scenarios by removing vessel names and leaving only the type of vessel.
- Table 2.1-2 was revised to remove information on the old tanks and enter information for the new tanks.
- Revised Section 2.1.11.1 regarding corrosion control and leak detection.
- Updated BAT Section 4 for tank cathodic protection and leak detection.
- Section 5 was revised to lower the RPS by a few barrels to provide actual volumes not rounded up volumes.

The changes associated with this amendment do not diminish XTO's response capability. The department approves the minor amendments as submitted in accordance with 18 AAC 75.415(f). The revised pages must be distributed to all control copies of the plan. All terms and conditions of the department's letters of approval and the existing Certificates of Approval remain in effect. The expiration dates of these amendments coincide with the existing plan approvals.

APPEAL: This is a final decision. Aggrieved persons with standing may appeal this decision to the Alaska Superior Court within 30 days as provided by the Alaska Rules of Appellate Procedure.

Ryan Tunseth
XTO Energy, Inc.

2

January 16, 2013

If you have any questions, please do not hesitate to contact me at (907) 269-7541 or shannon.dewandel@alaska.gov.

Sincerely,



Shannon DeWandel
Environmental Program Specialist

Electronic cc:

Graham Wood, ADEC
Laurie Silfven, ADEC
Bradley Dunker, ADFG
C-Plan Reviewer, ADNRR
Matt Carr, USEPA
Steve Russell, ADEC
Steve Catalano, CIRCAC
LCDR Daniel Buchsbaum, USCG - Anchorage
Lt. Sarah Geoffrion, USCG - Homer
MSTC Shawn Erwin, USCG - Anchorage
MST1 Brian Schughart, USCG - Anchorage
Christy Bohl, BSEE
Tom Dearlove, KPB
Legal Director, Trustees of Alaska
Bob Shavelson, Cook Inletkeeper
Hal Shepherd, Center for Water Advocacy

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION DIVISION OF SPILL PREVENTION AND RESPONSE INDUSTRY PREPAREDNESS PROGRAM

SEAN PARNELL, GOVERNOR

555 Cordova Street
Anchorage, AK 99501
PHONE: (907) 269-3094
FAX: (907) 269-7687
<http://www.dec.state.ak.us>

November 17, 2011

File Number 305.30
(XTO Energy)

OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN APPROVAL

Scott Griffith
XTO Energy Inc.
52260 Wik Road
Kenai, AK 99611

Subject: XTO Energy Inc. Oil Discharge Prevention and Contingency Plan for Cook Inlet Middle Ground Shoal Facilities (Platforms A and C, and Onshore Facility), Plan Number 11-CP-2059. Plan Approval

Dear Mr. Griffith:

The Alaska Department of Environmental Conservation (department) has completed our review of your application for the above referenced Oil Discharge Prevention and Contingency Plan (plan) dated June 2011. The department coordinated the State of Alaska's public review for compliance with 18 AAC 75, using the review procedures outlined in 18 AAC 75.455.

This approval applies to the following plan:

Plan Title: XTO Energy Inc. Oil Discharge Prevention and Contingency Plan for Cook Inlet Middle Ground Shoal Facilities (Platforms A and C, and Onshore Facility)

Supporting Documents: Cook Inlet Spill Prevention and Response, Inc. Technical Manual, as revised and updated

Plan Holder: XTO Energy Inc.
52260 Wik Road
Kenai, AK 99611

Covered Facility: Cook Inlet Middle Ground Shoal Facilities (Platforms A and C, and Onshore Facility)

Mr. Scott Griffith
XTO Energy Inc.

2

November 17, 2011

PLAN APPROVAL: Approval of the referenced plan is hereby granted, effective November 17, 2011. A certificate of approval stating that the department has approved the plan is enclosed. **This approval is subject to the following terms and conditions:**

TERMS AND CONDITIONS

The following items must be completed and/or received as specified to complete the plan in accordance with AS 46.04.030(e).

1. Notice of Changed Relationship with Response Action Contractor.

Because the plan relies on the use of response contractors for its implementation, XTO Energy Inc. (XTO) must immediately notify us in writing of any change in the contractual relationship with the plan holder's response action contractors, and of any event including, but not limited to, any breach by either party to the response contract that may excuse a response contractor from performing, that indicates a response contractor may fail or refuse to perform, or that may otherwise affect the response, prevention, or preparedness capabilities described in the approved plan.

This condition is reasonable and necessary because there are certain risks associated with allowing a plan holder to rely in part or total upon a response contractor instead of obtaining its own response capability. The risks arise, in part, because the certainty of the contractor's response is dependent upon the continuation of the legal relationship between it and the plan holder. Given this risk, the department must be promptly informed of any change of the contractual relationship between the plan holder and the response contractor, and of any other event that may arguably excuse the response contractor from performing or that would otherwise affect the response, prevention, or preparedness capabilities described in the approved plan. The department may seek appropriate modifications to the plan or take other steps to ensure that the plan holder has continuous access to sufficient resources to protect the environment and to contain, cleanup, and mitigate potential oil spills. 18 AAC 75.425(e)(3)(H) and 18 AAC 75.445(i).

2. Blowout Contingency Plan. A copy of the Blowout Contingency Plan (BCP) must be maintained at the XTO facility and made available to the department upon request.

This condition is necessary to ensure that the plan holder is prepared to control a potential well blowout. The department will review the blowout contingency plan when performing site inspections. 18 AAC 75.425(e)(1)(I), 18 AAC.445(d)(2), and 18 AAC 75.480.

3. Final Copy of the Plan. Within 30 days of this letter, the plan holder must submit to the department updated versions of the approved plan, including all revisions instituted during the recent plan review. XTO must send two complete plan copies to the Exploration, Production & Refineries Section in

Mr. Scott Griffith
XTO Energy Inc.

3

November 17, 2011

Anchorage and one copy to the department's Soldotna office. In addition, you must send an updated version of the plan to each reviewer and controlled document holder of your plan.

EXPIRATION: This approval **expires November 17, 2016**. After the approval expires, Alaska law prohibits operation of the facility until an approved plan is once again in effect.

AMENDMENT: Except for routine updates under 18 AAC 75.415(b), before a change to this plan may take effect, the plan holder must submit an Application for Amendment to the plan with any additional information needed to evaluate the proposed amendment. This is to ensure that changes to the plan do not diminish the plan holder's ability to respond to a discharge and to evaluate any additional environmental considerations that may need to be taken into account (18 AAC 75.415).

RENEWAL: To renew this approval, the plan holder must submit a completed renewal application and plan to the department no later than 180 days prior to the expiration of this approval. This is to ensure that the submitted plan is approved before the current plan in effect expires (18 AAC 75.420).

REVOCATION, SUSPENSION OR MODIFICATION: This approval is effective only while the plan holder is in "compliance with the plan" and with all of the terms and conditions described above. The department may, after notice and opportunity for a hearing, revoke, suspend or require the modification of an approved plan if the plan holder is not in compliance with it, or for any other reason stated in AS 46.04.030(f). In addition, Alaska law provides that a vessel or facility that is not in "compliance with the plan" may not operate (AS 46.04.030). The department may terminate approval prior to the expiration date if deficiencies are identified that would adversely affect spill prevention, response or preparedness capabilities.

DUTY TO RESPOND: Notwithstanding any other provisions or requirements of this plan, a person causing or permitting the discharge of oil is required by law to immediately contain and cleanup the discharge regardless of the adequacy or inadequacy of a plan (AS 46.04.020).

NOTIFICATION OF NON-READINESS: Within twenty-four (24) hours after any significant response equipment specified in the plan becomes non-operational or is removed from its designated storage location, the plan holder must notify the department in writing and provide a schedule for the equipment's substitution, repair, or return to service (18 AAC 75.475[b]).

CIVIL AND CRIMINAL SANCTIONS: Failure to comply with the plan may subject the plan holder to civil liability for damages and to civil and criminal penalties. Civil and criminal sanctions may also be imposed for any violation of AS 46.04, any regulation issued there under, or any violation of a lawful order of the department.

Mr. Scott Griffith
XTO Energy Inc.

November 17, 2011

INSPECTIONS, DRILLS, RIGHTS TO ACCESS, AND VERIFICATION OF EQUIPMENT, SUPPLIES AND PERSONNEL: The department has the right to verify the ability of the plan holder to carry out the provisions of its plan and access to inventories of equipment, supplies, and personnel through such means as inspections and discharge exercises, without prior notice to the plan holder. The department has the right to enter and inspect the covered vessel or facility in a safe manner at any reasonable time for these purposes and to otherwise ensure compliance with the plan and the terms and conditions (AS 46.04.030[e] and AS 46.04.060). The plan holder shall conduct exercises for the purpose of testing the adequacy of the plan and its implementation (18 AAC 75.480 and 485).

FAILURE TO PERFORM: In granting approval of the plan, the department has determined that the plan, as represented to the department by the applicant in the plan and application for approval, satisfies the minimum planning standards and other requirements established by applicable statutes and regulations, taking as true all information provided by the applicant. The department does not warrant to the applicant, the plan holder, or any other person or entity: (1) the accuracy or validity of the information or assurances relied upon; (2) that the plan is or will be implemented; or (3) that even full compliance and implementation with the plan will result in complete containment, control, or cleanup of any given oil spill, including a spill specifically described in the planning standards.

The plan holder is encouraged to take any additional precautions and obtain any additional response capability it deems appropriate to further guard against the risk of oil spills and to enhance its ability to comply with its duty under AS 46.04.020(a) to immediately contain and clean up an oil discharge.

COMPLIANCE WITH APPLICABLE LAWS: If amendments to the approved plan are necessary to meet the requirements of any new laws or regulations, the plan holder must submit an application for amendment to the department at the above address. The plan holder must adhere to all applicable state statutes and regulations as they may be amended from time to time. This approval does not relieve the plan holder of the responsibility for securing other federal, state, or local approvals or permits, and the plan holder is still required to comply with all other applicable laws.

INFORMAL REVIEW OR ADJUDICATORY HEARING: Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185.

Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800 within 15 days of the permit decision.

Mr. Scott Griffith
XTO Energy Inc.

5

November 17, 2011

Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800, within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived. Anyone who submits a request for an informal review or an adjudicatory hearing should also send a copy of the request to the undersigned.

If you have any questions, please contact Bob Tisserand at 269-3060.

Sincerely,



Betty Schorr
Program Manager

Attachment: Summary of Basis for Department Decision

Enclosure: Certificate of Approval, Number 11CER-030

Electronic cc w/o enclosure:

Scott Pexton, ADEC

Steve Russell, ADEC

Laurie Silfven, ADEC

Bob Tisserand, ADEC

Samantha Carroll, ADNRR

Bradley Dunker, ADFG

Matt Carr, USEPA

Steve Catalano, CIRAC

Gary Williams, KPB

Lieutenant Sarah Geoffrion, USCG - Kenai Detachment

MST1 Brian Schughart, USCG Sector - Anchorage

LCDR Bradley Clare, USCG Sector - Anchorage

MSTC Shawn Erwin, USCG Sector - Anchorage

Christy Bohl, BSEE

Bob Shavelson, Cook Inletkeeper

Legal Director, Trustees for Alaska



ALASKA DEPARTMENT
of
Environmental Conservation
Certificate of Approval
for



Oil Discharge Prevention and Contingency Plan

Certificate Number: **11CER-030**

Plan Number: **11-CP-2059**

Name of Plan: **XTO Energy Inc. Cook Inlet Middle Ground Shoal Facilities Oil Discharge Prevention and Contingency Plan**

Name of Facilities: **Platforms A and C, and Onshore Facility**

Address: **XTO Energy, 52260 Wik Road, Kenai, Alaska 99611-9704**

Telephone: **(907) 776-2506**

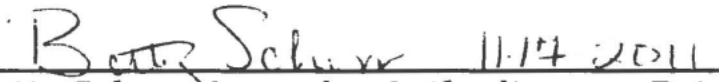
Fax: **(907)-776-2542**

Region of Operation (18 AAC 75.495): **Cook Inlet**

Effective Date of Approval: **November 17, 2011**

Date: **November 17, 2016**

This approval is subject to the terms and conditions of the applicable Alaska Department of Environmental Conservation contingency plan approval letter and continuing compliance with the requirements of AS 46.04 and 18 AAC 75.


Betty Schorr, Approving Authority **Date**
Program Manager, Industry Preparedness Program

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
INDUSTRY PREPAREDNESS PROGRAM**

**XTO ENERGY INC.
COOK INLET MIDDLE GROUND SHOAL FACILITIES
PLATFORMS A AND C, MARINE FLOWLINES AND
ONSHORE FACILITY
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN**

**PLAN APPROVAL
Summary of Basis for Department Decision
November 17, 2011**

Pursuant to 18 AAC 75.460(b)(1), the following is a summary of the basis for the Alaska Department of Environmental Conservation (department) decision to approve the XTO Energy Inc.(XTO) Oil Discharge Prevention and Contingency Plan (plan, C-plan, or ODPCP). Our approval includes referenced portions of the Cook Inlet Spill Prevention & Response (CISPRI) Technical Manual. This document summarizes key points and discusses issues raised during the department's review of the XTO application.

The following summarizes documents and milestones in the review process:

- June 3, 2011 – The department received the XTO Energy Inc. Oil Discharge Prevention and Contingency Plan for Cook Inlet Middle Ground Shoal Facilities (Platforms A and C, and Onshore Facility), Cook Inlet, Alaska.
- June 10, 2011 – The plan was declared sufficient for review.
- June 16, 2011 – The department issued letter, "Start of Plan Review."
- June 16, 2011 – The Public Notice appeared in the Anchorage Daily News, Kenai Peninsula Clarion, Homer News, and on the department's website on or before this date.
- June 16, 2011 – The department declared June 16, 2011 as Day 1 of the 30-day public review period. Day 30 fell on July 15, 2011.
- July 7, 2011 – The department issued letter suspending plan review.
- July 12, 2011 – The department received Cook Inlet Regional Citizens Advisory Council (CIRCAC) letter dated July 8, 2011 addressing CIRCAC issues and concerns.
- September 19, 2011 – The department issued a Request for Additional Information (RFAI) letter.
- October 7, 2011 – The department received XTO's response to RFAI letter.
- October 11, 2011 – The department issued letter stating plan is complete and extended the plan review period an additional 10 days.

**XTO ENERGY INC.
COOK INLET MIDDLE GROUND SHOAL FACILITIES
PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
PLAN APPROVAL, BASIS FOR DECISION**

- October 18, 2011 – The department received letter from CIRCAC restating a concern first expressed in CIRCAC's earlier letter dated July 8, 2011.
- November 17, 2011 – Plan approved.

Plan Description

This plan covers XTO Energy Inc.'s offshore Middle Ground Shoal (MGS) facilities and onshore facility in Cook Inlet. The MGS facilities consist of two offshore oil platforms (Platforms A and C) and the onshore facility consists of separation and processing facilities.

Response Planning Standard

The combined daily oil production from both platforms is approximately 2,800 barrels. Although some wells flow to surface, there is not enough formation pressure to economically push the oil to the surface, so assisted lift is provided with either gas lift or hydraulic lift. The response planning standard (RPS) volume for the XTO plan is based upon 70 barrels (bbl) of oil per day (bopd) from the highest producing well at Platform C for 15 days to (b) (7)(F) total spill potential in accordance with 18 AAC 75.434(e). The plan also includes a (b) (7)(F). The RPS is based on a (b) (7)(F) percent for secondary containment, 25 percent for impervious containment, and 10 percent for additional outside containment, in accordance with 18 AAC 75.432(d).

Response Scenarios and Strategies

Pursuant to 18 AAC 75.425(e)(1)(F), the plan must contain a description of the discharge containment, control, and cleanup actions to be taken, which clearly demonstrates the strategies and procedures to conduct and maintain an effective response, presented in the form of a response scenario to a discharge of each RPS volume. The plan contains scenarios for a marine flowline leak to open water, onshore surge tank failure, platform girder tank release, well blowout in summer conditions, and well blowout in winter conditions.

Based on the department's review, the response scenarios provide a logical plan of action with tactics, equipment, and personnel requirements identified in the CISPRI Technical Manual or maintained on site sufficient to demonstrate a response to a discharge equal to the RPS volumes, in addition to smaller, more probable spills.

**XTO ENERGY INC.
COOK INLET MIDDLE GROUND SHOAL FACILITIES
PLATFORMS A AND C, MARINE FLOWINES AND ONSHORE FACILITY
PLAN APPROVAL, BASIS FOR DECISION**

Public Comments

Written comments were received from the CIRCAC (first letter dated July 8, 2011 and a second letter dated October 18, 2011 received during the final 10-day public review period).

The comments from CIRCAC's letter dated July 8, 2011 were included in the department's September 19, 2011 RFAI letter where applicable, along with the department's concerns.

The CIRCAC October 18, 2011 letter restated a concern originally put forth in their July 8, 2011 letter regarding timeline to response scenarios.

This Summary of Basis for Department Decision addresses concerns, comments, and questions from the department's RFAI letter (September 19, 2011) and the CIRCAC letters dated July 8, 2011 and October 18, 2011. The department believes all comments have been fully addressed. The CIRCAC requests are listed below in standard text. The department's response to CIRCAC's comments follow in italicized text.

Part 1 Response Action Plan

1.2 Reporting and Notification

The flow chart in Figure 1.2-2 includes ExxonMobil in the initial notification sequence "as needed." CIRCAC requested the parameters that would require ExxonMobil's involvement and their role(s) and requested that the XTO response be more clearly explained.

Department's Response

The department is satisfied with the amount of information currently provided in Section 1.2, supplemented by Appendix A, Incident Command Staff (ICS) Contact list and ICS Organization Chart with regard to ExxonMobil support staff in a response. 18 AAC 75.425(e)(1)(B).

1.5 Deployment Strategy

The CIRCAC letter dated July 8, 2011 states that response scenarios do not contain a timeline which allows identification of equipment and personnel deployment times, nor their arrival or departure from response sites. Not having this information makes it difficult to evaluate response scenarios.

CIRCAC's October 18, 2011 letter restates in specific terms their disagreement that the XTO response to the department's RFAI letter on September 19, 2011 regarding the timeline for personnel and equipment responding to a scenario was adequate, "...We found no such addition to Table 1.5-6. Table 1.5-11 is

XTO ENERGY INC.
 COOK INLET MIDDLE GROUND SHOAL FACILITIES
 PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
 PLAN APPROVAL, BASIS FOR DECISION

new and does not show the timeline associated with the deployment of recovery equipment, but the purpose of this table is to illustrate 24 hour recovery capacity....We still request that XTO comply with the original request by providing a chronological narrative timeline for each scenario.”

Department’s Response

The department included CIRCAC’s original request in the department’s RFAI letter dated September 19, 2011. XTO’s response dated October 7, 2011 expanded Tables 1.5-1 through 1.5-11 addressing this request. The expanded tables in conjunction with the CISPRI Technical Manual cited in Section 1.5.1, “Transportation of Personnel and Equipment to Spill Site” adequately address by reference this request regarding timeline of equipment and personnel to spill sites. No further action was required, as the plan meets our regulatory requirements. 18 AAC 75.425(e)(1)(E) and (F).

1.5.4 Well Control

CIRCAC’s letter dated July 8, 2011 states, “...Section 1.5.4 indicates that a few of the wells located on Platform “C” can produce oil to the surface unassisted. This **is** also stated in section 5.2. However, section 1.5.4 does not indicate if Surface Safety Valves, Sub-Surface Safety Valves or Surface Controlled Sub-Surface Safety Valves (SSV, SSSV, SCSSV) are in service on those few wells. The well control options favored by XTO appear to rely on the ability to control the blowout at surface. A relief well is discussed as a last resort, unlikely option. XTO references the Blowout Contingency Plan for additional blowout control.

Cook Inlet RCAC views the Blowout Contingency Plan as a key component of the overall response system and we believe that a technical review of the blowout control options and planning described in that plan should be a component of the state C-plan review process. We advocate Alaska Oil and Gas Conservation Commission (AOGCC) review and approve the Blowout Contingency Plan as part of the ODPCP review and approval process. We believe the AOGCC has the in-house expertise necessary to effectively determine the adequacy of a Blowout Contingency Plan and that the approval of and incorporation of the Blowout Contingency Plan into the ODPCP process is paramount to achieving a comprehensive discharge contingency plan.

Cook Inlet RCAC requests that ADEC include in the C-plan review process the AOGCC review of the Blowout Contingency Plan to ensure that adequate planning is in place to undertake subsurface control measures if needed in the event of a blowout.”

XTO ENERGY INC.
 COOK INLET MIDDLE GROUND SHOAL FACILITIES
 PLATFORMS A AND C, MARINE FLOWINES AND ONSHORE FACILITY
 PLAN APPROVAL, BASIS FOR DECISION

Department's Response

The response scenario 1.6.1 Platform C Well Blowout lists Sub-Surface Safety Valves or Surface Controlled Sub-Surface Safety Valves (SSSV, SCSSV) on production wells. Further explanation of surface and subsurface safety valves on production wells are described in Section 2.1.7 Platform Well Control and Emergency Shutdown.

Regarding emergency shutdown, the department is satisfied that the information in the scenarios and text adequately addresses the valves in use for production wells that can flow to surface unassisted.

*The department agrees with CIRCAC's statement that a Blowout Contingency Plan (BCP) is a key component in controlling a well blowout. The department is coordinating with AOGCC on a "case by case" basis for its technical review of BCP's, but the BCP is separate and **not** part of an application or the plan review process; rather, it must be available for department inspection under 18 AAC 75.480. No further action was required relating to this comment. 18 AAC 75.425(e)(1)(I).*

1.5.5 Marine Flowline Spill Scenario

The scenario for a 1500-bbl flowline leak to open water references the deployment of four Cook Inlet Geographic Response Strategies (GRS): CCI-08-01, CCI-22-01, CCI-07-01, and CCI-06-02. The major equipment table for this scenario (Table 1.5-3) lists 1,500 feet of containment boom for nearshore response. CIRCAC commented that it was not clear whether this boom is inclusive of the boom needed for GRS deployment.

Department's Response

Additional text has been provided to clarify resources assigned to nearshore containment and recovery operations that implement GRS strategies. Reference has been made to Tactic CI-LP-4 in Table 1.5-2 providing additional information on boom inventory available through CISPRI. The department is satisfied that the additional information adequately addresses this concern. 18 AAC 75.425(e)(1)(F).

1.6 Platform C Well Blowout

CIRCAC commented, "Table 1.6-4 (Spill Response Resources) does not include nearshore or GRS deployment task forces. Table 1.6-2 describes nearshore response and protective booming as a "highest priority." Please reconcile this discrepancy by adding task forces to Table 1.6-4 to show how resources will be allocated to simultaneously conduct offshore response operations and also implement nearshore protective booming and recovery operations."

XTO ENERGY INC.
 COOK INLET MIDDLE GROUND SHOAL FACILITIES
 PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
 PLAN APPROVAL, BASIS FOR DECISION

Department's Response

Resources have been included to provide for priority sites. The new resources are expected to encounter or recover nominal volumes of oil and are not reflected in the Oil Recovery Timeline. Open water and nearshore task forces provide for the oil recovery capability necessary to meet the RPS. Language has also been added to clarify the contingency task force tasked to nearshore recovery, augmenting protection of sensitive sites. The department is satisfied that the additional information adequately addresses this concern. 18 AAC 75.425(e)(1)(F).

Part 2 Prevention Plan

2.1 Prevention Training Program

CIRCAC's July 8, 2011 letter recommends renaming this section to "Discharge Prevention Programs" to correlate more directly to the regulatory requirements of 18 AAC 75.425(e)(2)(A) for Section 2.1 of the plan.

Department's Response

The section adequately addresses the requirements of 18 AAC 75.425(e)(2)(A) even though it was not renamed.

2.1.1 Job Specific Prevention Training

"Per 18 AAC 75.445(m), the prevention plan must describe all oil discharge prevention programs in place at the facility or operation and the plan must demonstrate that the applicant meets all the applicable requirements of 18 AAC 75.005 – 18 AAC 75.085 and 18 AAC 75.425(e)(2). This section must describe how the applicant meets all the applicable requirements of 18 AAC 75.020, not just 18 AAC 75.020(a)."

Department Request No. 4 (two parts, excerpt from RFAI letter)

Please provide clarification on the points listed below as required by 18 AAC 75.425(e)(2):

1. Please provide a matrix as part of XTO's Oil Discharge Prevention Regulation Training Program listing positions of personnel performing corrosion monitoring and control programs, maintenance and testing of leak detection systems, monitoring of overfill alarms and other pollution prevention measures applicable to each position's duties. The matrix should also include the required training and qualifications of the personnel in positions performing these duties, as well as listing any licenses, certifications, and training appropriate for that position. 18 AAC 75.020.

**XTO ENERGY INC.
COOK INLET MIDDLE GROUND SHOAL FACILITIES
PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
PLAN APPROVAL, BASIS FOR DECISION**

2. Please provide information on how XTO tracks and verifies that contractors with job duties directly involving inspection, maintenance, or operation of oil storage and transfer equipment are appropriately and regularly trained. 18 AAC 75.020.

XTO's Response (excerpt from RFAI response letter)

XTO has chosen not to provide the prevention training program in a matrix format as neither 18 AAC 75.020 or 18 AAC 75.425(e)(2)(A)(i) mandate this presentation.

XTO believes that the information provided within the plan meets the requirements of 18 AAC 75.425(e)(2). However, additional clarification has been added to this section to clearly state that each XTO position is evaluated to determine training need – training applicable to the duties of the position driven by Corporate programs, regulatory requirements, and site-specific requirements. Most importantly, each position is scrutinized to provide for and assure safety of personnel, the public, and operations. ADEC has authority to review the computerized training program and records upon request.

XTO has evaluated contractor requirements based upon regulatory drivers. To remain in compliance with 18 AAC 75 and Department of Transportation (DOT) requirements – the primary contracting needs are NACE or API certified inspectors. As noted in the plan, these certifications are requested prior to hire and are included in the inspection report.

Department's Response

The department is satisfied that the additional information adequately addresses this request. No further action was required, as the plan adequately addresses the requirements of 18 AAC 75.425(e)(2)(A)(i) and 18 AAC 75.020.

2.1.10 Leak Detection, Monitoring and Operating Requirements

CIRCAC's initial letter stated, "Undetected leaks from subsea flowlines are well documented spill risk in Cook Inlet and a high priority concern of Cook Inlet RCAC. Section 2.1.10 states that flowline integrity is monitored by underwater driver, sidescan, sonar, leak detection systems, and pressure testing and references the DOT Integrity Management Program for this information. Section 2.1.13.1, which discusses integrity management for the flowlines at the production facility also references the DOT Integrity Management Program. Section 2.1.10 also describes several record keeping components to the leak detection monitoring systems that are maintained by the operator as part of their Integrity Management Program. Cook Inlet RCAC encourages ADEC to coordinate and/or communicate with DOT through any viable channels regarding integrity management programs in place for Cook Inlet operators.

XTO ENERGY INC.
 COOK INLET MIDDLE GROUND SHOAL FACILITIES
 PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
 PLAN APPROVAL, BASIS FOR DECISION

The text in this section notes that the leak detection system is linked to an alarm system and that records are kept for all incidents where a leak detection alarm is sounded. Cook Inlet RCAC recommends that ADEC review these records as part of the C-plan review.”

Department’s Response

XTO has edited Section 2.1.10 stating that the corrosion monitoring and control program for flowlines is consistent with Chapter VIII of Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids (ASME B31.4-2002). The department is satisfied that the editing in Section 2.1.10 adequately addresses this request. No further action was required. 18 AAC 75.047(c).

Department’s Request (excerpt from RFAI letter)

Please provide information in this section to clarify whether aboveground facility oil piping is supported consistent with the requirements of Paragraph 321 of Process Piping (ASME B31.3-2004).

XTO’s Response (excerpt from RFAI response letter)

XTO has edited Section 2.1.13.2 stating that aboveground facility oil piping is supported consistent with applicable requirements of ASME B31.3-2004.

Department’s Response

The department is satisfied that the editing in Section 2.1.13.2 adequately addresses this request. 18 AAC 75.080(i).

2.4 Operational Conditions Increasing Risk of Spill

2.4.1 Platforms and Onshore Facility

“This section does a very good job of discussing the platform’s design specifications, but does not discuss the conditions that may increase the onshore facilities’ risk of a spill. The onshore facility is mentioned in one sentence in the middle of a discussion about the platforms (the onshore facility is located atop a bluff 200 feet above the water level).

The plan does not address conditions that might increase the risk of a discharge for the onshore facility and the pipelines as required by regulation.”

Department’s Response

Section 3.2.1 describes detailed site topography and drainage patterns for all potential spill areas for the onshore facilities including tanks, LACT building, distribution building, sump tanks, and pig trap. The department is satisfied that this information adequately addresses this concern regarding onshore facilities. 18 AAC 75.425(e)(2)(D).

XTO ENERGY INC.
 COOK INLET MIDDLE GROUND SHOAL FACILITIES
 PLATFORMS A AND C, MARINE FLOWLINES AND ONSHORE FACILITY
 PLAN APPROVAL, BASIS FOR DECISION

Department Request (excerpt from RFAI letter)

3.2.1 Routes of Travel to Open Water

Please replace with a legible map that shows the probable drainage routes of the onshore facilities that may or may not drain into Cook Inlet

XTO Response (excerpt from RFAI response letter)

Figure 3.2-1 was replaced with a larger scale map as requested.

Department's Response

The replacement figure adequately addresses this request. 18 AAC 75.425(e)(3)(B)(i).

Department Request (excerpt from RFAI letter)

3.3 Command System

"Please reference in Section 3.3 the Incident Command System (ICS) Contact List and ICS Organization Chart located in Appendix A that shows a list of the Incident Management Team (IMT)/ICS positions and assigned personnel. 18 AAC 75.425(e)(3)(C)."

XTO's Response (excerpt from RFAI response letter)

The following edit was made to Section 3.3 Command System. "Appendix A provides XTO's ICS Contact List, IMT Organization Chart, and a list of the IMT ICS positions and assigned personnel. XTO's IMT is assisted through the response by their response contractor, CISPRI. CISPRI also implements immediate response operations and containment and recovery operations. As described in Section 1, Tier II/III responses are managed from CISPRI's Command Center. See Figure 3.3-1 for a diagram of the CISPRI Command Post. Figure 3.3-2 provides a location map of XTO's Kenai Office and Onshore Facility.

Department's Response

The department is satisfied that the additional information adequately addresses this request. 18 AAC 75.425 (e)(3)(C).

END

TABLE OF CONTENTS

INTRODUCTION.....	I-1
REGULATORY AGENCY REQUIREMENTS.....	I-1
PLAN FORMAT AND ORGANIZATION	I-1
ODPCP DISTRIBUTION.....	I-2
ODPCP UPDATES AND SUBMITTALS	I-3
FACILITY DESCRIPTION	I-4
 PART 1 RESPONSE ACTION PLAN	 1-1
1.1 EMERGENCY ACTION CHECKLIST	1-1
1.2 REPORTING AND NOTIFICATION.....	1-5
1.2.1 EXTERNAL NOTIFICATION PROCEDURES	1-5
1.2.2 XTO COMMAND CENTER	1-6
1.2.3 RESPONSE CONTRACTORS	1-6
1.3 SAFETY	1-12
1.4 COMMUNICATIONS.....	1-13
1.5 DEPLOYMENT STRATEGY	1-14
1.5.1 TRANSPORTATION OF PERSONNEL AND EQUIPMENT TO SPILL SITE	1-14
1.5.2 NOTIFICATION AND MOBILIZATION OF RESPONSE ACTION CONTRACTOR	1-15
1.5.3 SPILL RESPONSE SCENARIOS	1-15
1.5.4 WELL CONTROL PLAN	1-16
1.5.5 MARINE FLOWLINE SPILL SCENARIO.....	1-16
1.5.6 ONSHORE SURGE TANK SCENARIO	1-25
1.5.7 PLATFORM GIRDER TANK RELEASE SCENARIO	1-31
1.6 PLATFORM C WELL BLOWOUT.....	1-37
1.6.1 SUMMER CONDITIONS	1-37
1.6.2 WINTER CONDITIONS.....	1-46
1.7 NON-MECHANICAL RESPONSE OPTIONS.....	1-54
1.7.1 OBTAINING PERMITS AND APPROVALS.....	1-54
1.7.2 DECISION CRITERIA FOR USE.....	1-54
1.7.3 IMPLEMENTATION PROCEDURES.....	1-54
1.7.4 REQUIRED PERSONNEL AND EQUIPMENT	1-54
1.8 FACILITY DIAGRAMS	1-55
 PART 2 PREVENTION PLAN	 2-1
2.1 PREVENTION TRAINING PROGRAMS	2-1
2.1.1 JOB SPECIFIC PREVENTION TRAINING	2-1
2.1.2 SUBSTANCE ABUSE PROGRAM.....	2-2
2.1.3 MEDICAL PROGRAM.....	2-2
2.1.4 SECURITY PROGRAM.....	2-3
2.1.5 TRANSFER PROCEDURES	2-3
2.1.6 OPERATING REQUIREMENTS FOR EXPLORATION AND PRODUCTION FACILITIES.....	2-4
2.1.7 PLATFORM WELL CONTROL AND EMERGENCY SHUTDOWN	2-5
2.1.8 GENERAL INSPECTION PROCEDURES	2-7
2.1.9 PLATFORM SPILL PREVENTION SYSTEMS.....	2-7

2.1.10	LEAK DETECTION, MONITORING AND OPERATING REQUIREMENTS FOR FLOWLINE SURVEILLANCE	2-8
2.1.11	OIL STORAGE TANKS	2-8
2.1.12	SECONDARY CONTAINMENT AREAS FOR OIL STORAGE TANKS	2-14
2.1.13	PIPELINE INTEGRITY MANAGEMENT PROGRAM	2-16
2.2	DISCHARGE HISTORY (>55 GAL)	2-22
2.3	POTENTIAL DISCHARGE ANALYSIS	2-24
2.4	OPERATIONAL CONDITIONS INCREASING RISK OF A SPILL	2-25
2.4.1	PLATFORMS AND ONSHORE FACILITY	2-25
2.4.2	PIPELINES	2-26
2.5	DISCHARGE DETECTION	2-26
PART 3	SUPPLEMENTAL INFORMATION	3-1
3.1	FACILITY DESCRIPTION AND OPERATIONAL OVERVIEW	3-1
3.1.1	FLOWLINE ROUTING	3-1
3.1.2	OIL STORAGE CONTAINERS	3-1
3.1.3	TRANSFER PROCEDURES (TO OR FROM TANK VESSEL)	3-2
3.2	RECEIVING ENVIRONMENT (FOR ONSHORE FACILITY)	3-3
3.2.1	ROUTES OF TRAVEL TO OPEN WATER	3-3
3.2.2	AMOUNT TO REACH OPEN WATER	3-3
3.3	COMMAND SYSTEM	3-7
3.4	REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS	3-10
3.5	LOGISTICAL SUPPORT	3-10
3.6	RESPONSE EQUIPMENT	3-10
3.7	NOTIFICATION OF NON-READINESS	3-12
3.8	NON-MECHANICAL RESPONSE INFORMATION	3-13
3.9	RESPONSE CONTRACTOR INFORMATION	3-13
3.10	SPILL RESPONSE TRAINING	3-19
3.11	PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS AND AREAS OF PUBLIC CONCERN	3-20
3.11.1	PREDICTION OF DISCHARGE MOVEMENT	3-20
PART 4	BEST AVAILABLE TECHNOLOGY	4-1
4.1	COMMUNICATIONS	4-1
4.2	SOURCE CONTROL PROCEDURES	4-1
4.2.1	LOSS OF WELL CONTROL	4-1
4.2.2	RUPTURE OF THE FLOWLINES TO SHORE	4-1
4.2.3	FAILURE OF THE ONSHORE SURGE TANKS	4-2
4.2.4	FAILURE OF THE PLATFORM DIESEL FUEL STORAGE TANKS	4-2
4.3	TRAJECTORY ANALYSIS AND FORECASTS	4-2
4.4	WILDLIFE CAPTURE, TREATMENT AND RELEASE PROGRAMS	4-2
4.5	CATHODIC PROTECTION OR ANOTHER APPROVED CORROSION CONTROL SYSTEM	4-2
4.6	A LEAK DETECTION SYSTEM FOR EACH TANK	4-3
4.7	ANY OTHER PREVENTION OR CONTROL SYSTEM APPROVED BY THE DEPARTMENT	4-3
4.7.1	PLATFORM A & C GIRDER (DIESEL FUEL) TANKS AND PLATFORM C SHIPPING TANKS	4-3
4.7.2	PLATFORM AN ON-DECK TANK	4-3

4.7.3	ONSHORE SURGE AND SUMP TANKS.....	4-3
4.8	A MEANS OF IMMEDIATELY DETERMINING THE LIQUID LEVEL OF BULK STORAGE TANKS	4-4
4.8.1	PLATFORM A & C GIRDER (DIESEL FUEL) TANKS	4-4
4.8.2	PLATFORM A ON-DECK TANK AND PLATFORM C SHIPPING TANKS	4-4
4.8.3	ONSHORE SURGE TANKS.....	4-4
4.8.4	ONSHORE SUMP TANKS.....	4-4
4.9	MAINTENANCE PRACTICES FOR BURIED STEEL PIPING CONTAINING OIL	4-4
4.10	PROTECTIVE WRAPPING OR COATING AND CATHODIC PROTECTION	4-5
4.11	CORROSION SURVEYS.....	4-5
PART 5	RESPONSE PLANNING STANDARD.....	5-1
5.1	RELEASES FROM OIL TERMINAL FACILITY	5-1
5.2	RELEASES FROM PRODUCTION FACILITIES	5-1
5.3	RELEASES FROM CRUDE OIL PIPELINES	5-2
5.4	RATIONALE FOR CLAIMED PREVENTION CREDITS.....	5-3
PART 6	REFERENCES	6-1
APPENDICES		
APPENDIX A	ICS CONTACT LIST AND ICS ORGANIZATION CHART	
APPENDIX B	OPA 90 SUPPLEMENT AND MATERIAL SAFETY DATA SHEETS (MSDS)	

TABLES

TABLE 1.1-1	INITIAL SPILL RESPONSE AND NOTIFICATION PROCESS FOR SPILL RESPONSE	1-3
TABLE 1.1-2	ROLES OF ON-SCENE PERSONNEL (OIL OR CHEMICAL SPILL).....	1-4
TABLE 1.2-1	AGENCY NOTIFICATION REQUIREMENTS FOR SPILLS: OIL, PRODUCED WATER, SEWAGE, CHEMICALS, SEAWATER, ETC.....	1-9
TABLE 1.5-1	INITIAL CONDITIONS, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-16
TABLE 1.5-2	RESPONSE STRATEGY, MGS MARINE FLOWLINE LEAK TO OPEN WATER.....	1-17
TABLE 1.5-3	MAJOR EQUIPMENT AND STAFFING FOR RECOVERY TASK FORCES, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-22
TABLE 1.5-4	MASS BALANCE CALCULATIONS, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-23
TABLE 1.5-5	OIL TO BE RECOVERED, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-23
TABLE 1.5-6	MGS MARINE FLOWLINE LEAK TO OPEN WATER, OIL RECOVERY TIMELINE	1-24
TABLE 1.5-7	ONSHORE SURGE TANK FAILURE SCENARIO.....	1-25
TABLE 1.5-8	MASS BALANCE CALCULATIONS	1-28
TABLE 1.5-9	RECOVERY AND HANDLING CAPABILITY	1-28
TABLE 1.5-10	MAJOR EQUIPMENT AND STAFFING FOR RECOVERY TASK FORCES.....	1-29
TABLE 1.5-11	ONSHORE SURGE TANK FAILURE SCENARIO, TIMELINE DEPICTING RECOVERY CAPABILITY*.....	1-29
TABLE 1.5-12	INITIAL CONDITIONS, PLATFORM GIRDER TANK RELEASE	1-31
TABLE 1.5-13	RESPONSE PLAN, PLATFORM GIRDER TANK RELEASE	1-32
TABLE 1.5-14	PLATFORM GIRDER TANK RELEASE, OIL RECOVERY TIMELINE	1-36
TABLE 1.6-1	INITIAL CONDITIONS – PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS.....	1-37
TABLE 1.6-2	RESPONSE STRATEGY, PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS	1-38
TABLE 1.6-3	MGS PLATFORM C BLOWOUT SCENARIO – OIL RECOVERY TIMELINE – SUMMER CONDITIONS.....	1-43
TABLE 1.6-4	SPILL RESPONSE RESOURCES – PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS.....	1-45
TABLE 1.6-5	CONDITIONS, PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-46
TABLE 1.6-6	RESPONSE STRATEGY, PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-47
TABLE 1.6-7	MGS PLATFORM C BLOWOUT SCENARIO – OIL RECOVERY TIMELINE – WINTER CONDITIONS.....	1-51
TABLE 1.6-8	SPILL RESPONSE RESOURCES – PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-53
TABLE 2.1-1	MGS WELL CONTROL SYSTEMS AND EQUIPMENT.....	2-6
TABLE 2.1-2	MIDDLE GROUND SHOAL OIL STORAGE TANK INSPECTION SCHEDULE	2-10
TABLE 2.2-1	MIDDLE GROUND SHOAL SPILL HISTORY*.....	2-22
TABLE 2.3-1	ANALYSIS OF POTENTIAL DISCHARGES	2-24
TABLE 2.5-1	MIDDLE GROUND SHOAL DISCHARGE DETECTION SYSTEMS.....	2-27
TABLE 3.1-1	MIDDLE GROUND SHOAL OIL STORAGE CONTAINERS (CAPACITY >10,000 GAL.)	3-2
TABLE 3.6-1	ESTIMATED RESPONSE TIMES FOR MOBILIZING AND TRANSPORTING EQUIPMENT FROM OTHER LOCATIONS IN ALASKA.....	3-12
TABLE 3.10-1	TRAINING FOR XTO DISCHARGE RESPONSE PERSONNEL.....	3-19
TABLE 3.11-1	CENTRAL COOK INLET GRS.....	3-20
TABLE 4.11-1	BAT ANALYSIS: SOURCE CONTROL ON GATHERING LINES	4-6
TABLE 4.11-2	BAT ANALYSIS: SOURCE CONTROL ON ONSHORE SURGE TANKS.....	4-7
TABLE 4.11-3	BAT ANALYSIS: SOURCE CONTROL ON PLATFORM GIRDER TANKS (DIESEL FUEL)	4-8
TABLE 4.11-4	BAT ANALYSIS: HIGH LIQUID LEVEL, PLATFORM A & C GIRDER TANKS.....	4-9
TABLE 4.11-5	BAT ANALYSIS: BURIED PIPING MAINTENANCE PRACTICES	4-10
TABLE 4.11-6	BAT ANALYSIS: CORROSION SURVEYS	4-12
TABLE 4.11-7	BAT ANALYSIS: ONSHORE SURGE TANK LEAK DETECTION SYSTEM	4-14

FIGURES

FIGURE I-1	LOCATION MAP FOR XTO COOK INLET FACILITIES	I-5
FIGURE I-2	XTO PLATFORM A	I-6
FIGURE I-3	XTO PLATFORM C	I-7
FIGURE I-4	XTO EAST FORELANDS “ONSHORE” FACILITY	I-8
FIGURE 1.1-1	EMERGENCY ACTION WALLET CARD	1-2
FIGURE 1.2-1	XTO ALASKA OPERATIONS SPILL REPORT FORM (AGENCY NOTIFICATION)	1-7
FIGURE 1.2-2	SPILL NOTIFICATION SEQUENCE	1-8
FIGURE 1.2-3	ADEC OIL AND HAZARDOUS SPILL PLACARD	1-11
FIGURE 1.5-1	ONSHORE FACILITY SURGE TANK RUPTURE SCENARIO – SIMULATED OIL TRAJECTORY	1-30
FIGURE 1.6-1	SUMMER OIL SPILL TRAJECTORY AT HOUR 72	1-42
FIGURE 1.6-2	WINTER OIL SPILL TRAJECTORY AT HOUR 72	1-50
FIGURE 1.8-1	XTO COOK INLET FACILITIES	1-56
FIGURE 1.8-2	PLATFORM A FUEL TRANSFER SCHEMATIC	1-57
FIGURE 1.8-3	PLATFORM C FUEL TRANSFER SCHEMATIC	1-58
FIGURE 1.8-4	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (1 OF 4)	1-59
FIGURE 1.8-5	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (2 OF 4)	1-60
FIGURE 1.8-6	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (3 OF 4)	1-61
FIGURE 1.8-7	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (4 OF 4)	1-62
FIGURE 2.1-1	ONSHORE SURGE TANKS DETAIL WITH SECONDARY CONTAINMENT AND LEAK DETECTION SYSTEMS	2-13
FIGURE 2.1-2	ONSHORE SUMP TANKS SECONDARY CONTAINMENT	2-15
FIGURE 2.1-5	OFFSHORE PIPELINE SCHEMATIC	2-18
FIGURE 2.1-6	ON SHORE FACILITY FLOW DIAGRAM	2-20
FIGURE 2.1-7	IMPRESSED CURRENT SYSTEM	2-21
FIGURE 3.2-1	TOPOGRAPHIC MAP OF XTO’S MGS ONSHORE FACILITY	3-5
FIGURE 3.3-1	LAYOUT OF CISPRI’S COMMAND CENTER	3-8
FIGURE 3.3-2	LOCATION MAP FOR XTO’S KENAI OFFICE AND ONSHORE FACILITY	3-9
FIGURE 3.5-1	ROADS AND STAGING AREAS IN COOK INLET	3-11
FIGURE 3.9-1	STATEMENT OF CONTRACTUAL TERMS - CISPRI	3-15
FIGURE 3.9-2	STATEMENT OF CONTRACTUAL TERMS – WITT O’BRIEN’S	3-17
FIGURE 3.11-1	ENVIRONMENTALLY SENSITIVE AREAS IN COOK INLET	3-22

**THIS PAGE
INTENTIONALLY
LEFT BLANK**



XTO Energy Inc.
Cook Inlet Middle Ground Shoal Facilities
(Platforms A and C, Marine Flowlines and Onshore Facility)

**OIL DISCHARGE PREVENTION
AND CONTINGENCY PLAN**

**MANAGEMENT APPROVAL
AND AUTHORIZATION**

This plan has been reviewed and approved by the management of XTO Energy Inc. The necessary resources to implement the plan fully are hereby committed.


John Baker – Vice President – Operations

1-21-2014
Date

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

RECORD OF REVISIONS

Date	Page or Part	Revision Scope
January 2013	Edits made throughout the Plan.	Revision 1: New tank information incorporated into the plan and updates to associated spill prevention and response measures. Minor editorial changes were completed.
March 2013	Part 1 including Figure 1.2-2 Spill Notification Sequence, Figure 1.2-3 ADEC Placard Scenario Updates, and Figures 1.8-4 through 1.8-7. Parts 2 and 3: Figures 2.1-6 and 3.2-1	Revision 2: Update of emergency response notifications and contacts, including Appendix B. PRAC equipment upgrades incorporated into scenarios and facility figures updated to reflect new tanks at the facility. Facility flow diagrams updated.
January 2014	Revision History (iii) Distribution List (v –vi) Response Contractor (1-6) Response Contractor Name Update (1-15) Tank Inspection Table (2-10) Sump Tank Details (2-11) Date change on API 570 Inspection (2-19) Tank Table (3-2) Response Contractor Name Update (3-7,13,17) Command Center Layout (3-8) References (6-1) ICS Contact Sheet (Appendix-A)	Revision 3: Plan Cover ICS contact information updated. Changes made to the description details and inspection interval of the Onshore Sump tanks. This change was required per ADEC Compliance Letter dated 10/25/2013 Updates to reflect name change of O'Brien's RM to Witt O'Brien's Update to References to reflect removal of bolted tanks.
April 2014	Appendix B Controlled Copy Distribution List (v-vi) Job Specific Prevention Training (Section 2.1.1)	Clarification for 49 CFR §194 compliance Controlled Copy Distribution List updated Retention policy for training records clarified.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

Controlled Copy Distribution List

Copy #	HC or CD	Name and Address	Phone #	Email Address
1	HC	Scott Griffith – XTO Energy Inc. Production Superintendent 52260 Wik Road Kenai Alaska 99611	(907) 776-2506	scott_griffith@xtoenergy.com
2	HC	Ryan Tunseth – XTO Energy Inc. EHS Manager 52260 Wik Road Kenai, Alaska 99611	(907) 776-2510	ryan_tunseth@xtoenergy.com
3	HC	Platform A – XTO Energy Inc.	(907) 776-5241	n/a
4	HC	Platform C – XTO Energy Inc.	(907) 776-5251	n/a
5	HC	John Baker – XTO Energy Inc. Vice President 9127 S Jamaica, Inglewood, CO, 80112	(303) 397-3600	john_baker@xtoenergy.com
6	HC	Jennifer Horneman XTO Energy Inc. Sr. Facilities Engineer 9127 Jamaica Street, Inglewood, CO, 80112	(303) 397-3640 (720) 879 7972	jennifer_horneman@xtoenergy.com
7	HC	Nina Hutton – XTO Energy Inc. Vice President - EHS 810 Houston Street, Ste. 2000 Fort Worth, TX 76102	(817) 885-2181 (817) 821-5960	nina_hutton@xtoenergy.com
8	HC	Kim Fox – ExxonMobil AK Public Affairs Manager 3301 C Street Suite 400 Anchorage AK 99503	(907) 564-3628 (907) 230-3530	kim.j.fox@exxonmobil.com
9	HC	Irene Garcia - ExxonMobil AK Pt. Thomson SSHE Manager 3301 C Street Suite 400 Anchorage AK 99503	(907) 564-3773 (281) 728-3836	irene.t.garcia@exxonmobil.com
10	HC	Todd Paxton – CISPRI P.O. Box 7314 N kiski, AK 99635	(907) 776-5129	tpaxton@cispri.com
11	HC	Lieutenant William Albright USCG - MSD Homer 104 East Pioneer Ave #2 Homer, AK 99603	(907) 235-3292	william.c.albright@uscg.mil
12	CD	Samantha Carroll AK Dept. of Natural Resources 550 West 7 th Ave. Suite 400 Anchorage, AK 99501-3510	(907) 269-8425	samantha.carroll@alaska.gov
13	CD	Bob Whittier US EPA 222 W. 7 th Avenue, #19 Anchorage, AK 99513	(907) 271-3247	bob.whittier@epa.gov

14, 15 16	HC (2) CD	Eugene Cataldi ADEC – IPP - EPR 555 Cordova St. Anchorage, AK 99501	(907) 269-3060	eugene.cataldi@alaska.gov
17	CD	Brad Dunker AK Department of Fish & Game Anchorage Regional Office 333 Raspberry Road Anchorage, AK 99518-1599	(907) 267-2541	brad.dunker@alaska.gov
18	CD	William Stillings Witt O'Brien's- Alaska Millionaire Hangar 6160 Carl Brady Drive Anchorage, AK 99502	(907) 550-8502	wstillings@wittobriens.com
19	CD	David K. Lehman – USDOT Office of Pipeline Safety Room E22-210 1200 New Jersey Ave SE Washington, DC 20590	(202) 366-4560	PHMSA.OPA@dot.gov

**CROSS REFERENCE TO U.S. BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
RESPONSE PLAN REQUIREMENTS**

30 CFR PART 254	DESCRIPTION	PLAN SECTION
.22(a)	Information Summary	Introduction
.22(b)	Table of Contents	Table of Contents
.22(c)	Record of Plan Changes	List of Revisions
.22(d)	Cross Reference Table	BSEE Cross Index
.23(a)	Identification of Qualified Individual	Section 1.1
.23(b)	Identification of spill management team	Appendix A; Section 3.3
.23(c)	Description of spill operating team	Appendix A; Section 3.3, CISPRI Technical Manual
.23(d)	Spill response command center	Section 3.3; CISPRI Technical Manual
.23(e)	List of types of oil	Appendix B – Section 8.0
.23(f)	Spill detection procedures	Section 2.5
.23(g)(1)(i)	Spill notification procedures	Section 1.2
.23(g)(1)(ii)(A)	OSRO Identification	Section 3.9: CISPRI Technical Manual
.23(g)(1)(ii)(B)	Agency consultation information	Introduction CISPRI Technical Manual
.23(g)(1)(ii)(C)	Agency reporting information	Section 1.2
.23(g)(2)	Methods to monitor spill movement	Sections 3.11.1 CISPRI Technical Manual
.23(g)(3)	Methods for identifying and prioritizing sensitive areas	Section 3.11 CISPRI Technical Manual
.23(g)(4)	Methods to protect sensitive areas	Section 3.11 CISPRI Technical Manual
.23(g)(5)	Methods for mobilization and deployment of equipment and personnel to the spill site	Section 1.5 CISPRI Technical Manual
.23(g)(6)	Methods to ensure continuing recovery operations	Section 1 CISPRI Technical Manual
.23(g)(7)	Procedures for oil removal from shorelines and wildlife	Section 3.11 CISPRI Technical Manual
.23(g)(8)	Procedures for oil / waste disposal	Section 1 CISPRI Technical Manual
.23(g)(9)	Methods for implementing non-mechanical response plans	Section 1.7; Section 3.8; CISPRI Technical Manual
.24(a)	Spill response supplies and equipment inventory	Section 3.6; CISPRI Technical Manual - Appendix A

**CROSS REFERENCE TO U.S. BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
RESPONSE PLAN REQUIREMENTS**

30 CFR PART 254	DESCRIPTION	PLAN SECTION
.24(b)	Procedures for equipment inspection and maintenance plan	CISPRI Technical Manual
.25	OSRO contractual agreement information	Section 3.9
.26(a)	Worst case discharge volume estimation	Part 5
.26(b)	Trajectory analysis	Section 1.6, Section 3.11.1 CISPRI Technical Manual
.26(c)	List of resources impacted by trajectory analysis	Section 3.11.1 CISPRI Technical Manual
.26(d) & (e)	Effects of adverse weather conditions on response strategies	Section 3.4 CISPRI Technical Manual
.27	Dispersant use plan information	Section 3.8 CISPRI Technical Manual
.28	In-situ burning plan information	Section 3.8 CISPRI Technical Manual
.29	Training and drill information	Sections 2.1 and 3.10 CISPRI Technical Manual Appendix B – Section 7.0

CROSS REFERENCE TO U.S. DEPARTMENT OF TRANSPORTATION

49 CFR PART 194	DESCRIPTION	PLAN SECTION
194.107 (c)(1)(i)	Information Summary	Introduction, Section 1.0
194.107 (c)(1)(ii)	Notification Procedures	Section 2.1
194.107 (c)(1)(iii)	Spill Detection & Mitigation Procedures	Section 2
194.107 (c)(1)(iv)	OSRO Information	Section 3.9
194.107 (c)(1)(v)	Response Activities and Resources	Section 1 and Section 3
194.107 (c)(1)(vi)	Agency Contact numbers	Appendix A
194.107 (c)(1)(vii)	Training Procedures	Sections 2.1 and 3.10; CISPRI Technical Manual
194.107 (c)(1)(viii)	Equipment Testing	Sections 2 and 3 CISPRI Technical Manual
194.107 (c)(1)(ix)	Drill types, schedules, and procedures	Appendix B – Section 7.0
194.107 (c)(1)(x)	Plan Review and Update procedures	Introduction

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
ODPCP Cover Page		
425(c)(1)(2)(3)	(c) The submitted plan must be accompanied by a cover page or promulgation letter that includes (1) the name of the plan holder, and the covered vessel, barge, railroad, facility, or operation, followed by the words "Oil Discharge Prevention and Contingency Plan"; (2) the date of the plan; and (3) a statement, signed by a person with appropriate authority, committing the resources necessary to implement the plan.	Cover page Management Approval and Manpower Authorization
ODPCP Title Page		
425(d)(1)(2)(3)(4)	(d) The plan must (1) include the official plan title; (2) consist of the five parts and contain the information described in (e) (1)-(5) of this section; (3) contain a complete table of contents and lists of any tables or figures, with corresponding page numbers; and (4) be presented in the order shown in (e) of this section, or include a cross reference table that directs the reader to the appropriate information.	Title Page Table of Contents Table of Contents Shown as in (e) of this section and with a cross reference table
ODPCP Contents		
425(e)(1)	(1) PART 1 - RESPONSE ACTION PLAN: The response action plan must provide in sufficient detail to clearly guide responders in an emergency event, all information necessary to guide response to a discharge of any size, up to and including a discharge that is equal to the applicable response planning standard set out at 18 AAC 75.430 - 18 AAC 75.442; the response action plan must include the following information:	Part 1 Response Action Plan:
425(e)(1)(A)	(A) emergency action checklist - a short checklist of the immediate response and notification steps to be taken if an oil discharge occurs; it is recommended that this summary be duplicated on a wallet-size card, to be carried by the appropriate response personnel while on duty;	Section 1.1
425(e)(1)(B)(i)(ii)	(B) reporting and notification - a description of the immediate spill reporting actions to be taken at any hour of the day, including (i) the title and telephone number of facility personnel responsible for making the notification; and (ii) the telephone number of each appropriate government agency to be notified if a discharge occurs;	Section 1.1 and 1.2 Table 1.2-1
425(e)(1)(C)	(C) safety - based on applicable safety standards, a description of the steps necessary to develop an incident-specific safety plan for conducting a response;	Section 1.3
425(e)(1)(D)	(D) communications - a description of field communications procedures, including, if applicable, assigned radio channels or frequencies and their intended use by response personnel;	Section 1.4
425(e)(1)(E)(i)(ii)	(E) deployment strategies - a description of proposed initial response actions that may be taken, including (i) procedures for the transport of equipment, personnel, and other resources to the spill site, including plans for alternative methods in adverse weather conditions; and (ii) if the operator is not the primary spill responder, procedures to notify and mobilize the response action contractor or other responder identified in the plan, including a description of the interim actions that the operator will perform until the responder identified in the plan initiates a full response to the discharge;	Section 1.5

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
425(e)(1)(F)(i)to(v)	(F) Response scenario - a written description of a hypothetical spill incident and response that demonstrates a plan holder's ability to respond to a discharge of each applicable response planning standard volume within the required time frames using the resources described in the contingency plan, and that identifies the spill location, time of year, and time of day, the source and cause of the spill, the quantity and type of oil spilled, the relevant environmental conditions, including weather, sea state and visibility, the spill trajectory, and the expected timeline for response actions, describing response actions to be taken; the response scenario must be usable as a general guide for a discharge of any size, must describe the discharge containment, control, and cleanup actions to be taken, which clearly demonstrate the strategies and procedures adopted to conduct and maintain an effective response, and if the response scenario is for an explanation or production facility, must also meet the applicable requirements of (I) of this paragraph; if required by the department, the plan holder must provide additional response strategies to account for variations in receiving environments and seasonal conditions; if the information required by this subparagraph is contained within a separate document developed by the plan holder or the plan holder's primary response action contractor identified in (3)(H) of this subsection, the plan holder may incorporate the information by reference upon obtaining the department's approval; response strategies must include (i) procedures to stop the discharge at its source and prevent its further spread; (ii) a description of methods to prevent or control a potential fire hazard; (iv) procedures and methods for real-time surveillance and tracking of the discharged oil on open water and forecasting of its expected points of shoreline contact; (v) ...and, if requested by the department, for a vessel, a description of site-specific strategies for the protection of environmentally sensitive areas and areas of public concern identified under (3)(J) of this subsection, ...if identification of those areas and site-specific strategies for protection of those areas are in an applicable subarea contingency plan, the plan holder may incorporate that information by reference; (vi) a description of the actions to be taken to contain and control the spilled oil, including, as applicable, boom deployment strategies, construction of temporary berms, and other methods; (vii) a description of the actions to be taken to recover the contained or controlled oil using mechanical response options, including procedures and provisions for skimming, absorbing, or otherwise recovering the contained or controlled product from water or land; (viii) procedures for lightering, transfer, and storage of oil from damaged tanks or from undamaged tanks that might be at risk of discharging additional oil; (ix) procedures for transfer and storage of recovered oil and oily water, including methods for estimating the amount of recovered oil; (x) procedures and locations for temporary storage and ultimate disposal of oil contaminated materials, oily wastes, and sanitary and solid wastes, including procedures for obtaining any required permits or authorizations for temporary storage or ultimate disposal; (xi) procedures and methods for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including: minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers ;and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and (xii) if applicable, a description of procedures for the deployment of shoreline cleanup equipment and personnel, including cleanup and restoration methods and techniques to be used if the shoreline is impacted by the discharge;	Section 1.5 Section 1.6
425(e)(1)(G)	(G) nonmechanical response options - if applicable, a description of actions to be taken to obtain the necessary permits and approvals to initiate dispersant application, in situ burning, or other nonmechanical response options, the basis for determining the conditions or circumstances under which these options will be used, and how the nonmechanical response options will be implemented, including a description of all required equipment and personnel; and	Section 1.7

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
425(e)(1)(H)	(H) facility, railroad, or vessel diagram - a plan diagram of the facility, vessel, or operation for reference in conducting emergency response operations, with locations of response equipment and other features pertinent to the response plan clearly marked, including surrounding topography, roads, air transportation and other transportation access, location and bathymetry of adjacent water bodies, mooring areas, oil transfer locations, pipelines, control stations, drip pans and drainage of drip pans, and a representation of the distance and gradients to surface water for an operation located on land, by topographic map, aerial photographs, or other means; for a railroad tank car or locomotive, a diagram must be included for each distinct type of railroad tank car or locomotive showing locations of fuel and lubrication systems and oil storage tanks, piping, and valves;	Section 1.8
425(e)(2)	(2) Part 2 - Prevention Plan: The prevention plan must include a detailed description of all oil discharge prevention measures and policies employed at the facility, vessel, or operation, with reference to the specific oil discharge risks involved. The prevention plan must describe how the applicant meets all the applicable requirements of 18 AAC 75.005-18 AAC 75.085. The prevention plan may be submitted as a separate volume, and must include, at a minimum, the following information:	Part 2 Prevention Plan
425(e)(2)(A)	(A) discharge prevention programs - a description and schedule of regular oil discharge prevention, inspection, and maintenance programs in place at the facility or operation, including (i) oil discharge prevention training programs required by 18 AAC 75.020(a); (ii) substance abuse and medical monitoring programs required by 18 AAC 75.007(e); (iii) security and surveillance programs required by 18 AAC 75.007(f);	Section 2.1.1
425(e)(2)(B)	(B) discharge history -a history of all known oil discharges greater than 55 gallons that have occurred at the facility within the state; the history must include (i) the source, cause, amount of each discharge; (ii) corrective action taken; (iii) an analysis of the relationship, if any, between the frequency, cause, and size of the discharges;; and (iv) a description of actions to be taken to prevent or mitigate similar discharges in the future;	Section 2.2
425(e)(2)(C)	(C) potential discharge analysis - an analysis of potential oil discharges ,including size, frequency, cause, duration, and location, and a description of actions taken to prevent a potential discharge;	Section 2.3
425(e)(2)(D)	(D) specific conditions - a description of (i) any conditions specific to the facility or operation that might increase the risk of a discharge, including physical or navigation hazards, traffic patterns, and other site-specific factors; and (ii) any measures that have been taken to reduce the risk of a discharge attributable to these conditions, including a summary of operating procedures designed to mitigate the risk of a discharge;	Section 2.4
425(e)(2)(E)	(E) a description of the existing and proposed means of discharge detection , including surveillance schedules, leak detection, observation wells, monitoring systems, and spill-detection instrumentation; if electronic or mechanical instrumentation is employed, detailed specifications, including threshold detection, sensitivities, and limitations of equipment must be provided;	Section 2.5
425(e)(2)(F)	(F) waivers - for an operation subject to a waiver, alternate compliance schedule, or existing condition of plan approval under 18 AAC 75.005 - 18 AAC 75.085 or 18 AAC 75.400 – 18 AAC 75.496, documentation of (i) each waiver, alternate compliance schedule, or existing condition of plan approval; and (ii) the approval of each waiver, alternate compliance schedule, or existing condition of plan approval;	N/A
425(e)(3)	(3) PART 3 - SUPPLEMENTAL INFORMATION: The supplemental information section must provide background and verification information, including	Part 3 Supplemental Information

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
425(e)(3)(A)	(A) facility description and operational overview - a general description of the oil storage, transfer, exploration, or production activities of the operation, including (iii) for vessels, a general chart showing routes normally used for the transportation of oil products within state waters, and the frequency of use for each route; (v) for vessels, plans or diagrams that identify cargo, bunker, and ballast tanks, all tank capacities, cargo piping, ballast piping, winches, emergency towing equipment, power plants, manifold pipe size, containment structures and equipment, and a description of the method of containing a discharge from fuel oil tank vent overflow and fill pipes; (vi) a general description of the procedures for the loading or transfer of oil from or to a pipeline, facility, tank vessel, oil barge railroad tank car, or storage tank; (viii) for vessels, a description of the methods for retention and disposal of oily wastes and bilge slops;	Section 3.1 Section 3.1.4
425(e)(3)(B)	(B) receiving environment - for a land-based facility or operation (or operation on solid sea ice): (i) the potential routes of travel of oil discharged from the facility or operation to open water in the form of a drainage diagram or map, showing gradients and potential containment sites and features, including identification and explanation of all measures that will be taken to prevent a discharge from entering open water; and (ii) based on the information in (i) of this subparagraph, an estimate of what percentage of the applicable response planning standard volume set out at 18 AAC 75.430 - 18 AAC 75.436, or 18 AAC 75.442 for the facility or operation will reach open water;	Section 3.2
425(e)(3)(C)	(C) command system - a description of the command system to be used in response to a discharge, including the title, address, telephone number, and affiliation by company, agency, or local government of each person, including a person identified in (1)(B) of this subsection, who by law or through employment, contract, or cooperative agreement, is responsible for responding to a discharge, and each person's functional role in the command system; this list must include command, fiscal, operations, planning, and logistics lead personnel; the command system must be compatible with the state's response structure outlined in the state master plan prepared under AS 46.04.200;	Section 3.3
425(e)(3)(D)(i) to (v)	(D) realistic maximum response operating limitations - a description of the realistic maximum response operating limitations that might be encountered at the facility or operation and, based on environmental and safety considerations, an analysis of the frequency and duration, expressed as a percentage of time, of limitations that would render mechanical response methods ineffective; the realistic maximum response operating limitations for a response must be defined, with a description of any additional specific temporary prevention or response measures that will be taken to reduce the environmental consequences of a discharge, including nonmechanical response options, during those periods when environmental conditions exceed this maximum; environmental conditions to be considered in this analysis must include (i) weather, including wind, visibility, precipitation and temperature; (ii) sea states, tides, and currents; (iii) ice and debris presence; (iv) hours of daylight; and (v) other known environmental conditions that might influence the efficiency of the response equipment or the overall effectiveness of a response effort;	Section 3.4 Section 1.7
425(e)(3)(E)	(E) logistical support - identification of aircraft, vessels, and other means that may be used to transport equipment and personnel during a discharge response, including information on ownership and availability of identified means of transportation;	Section 3.5

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
425(e)(3)(F)(i) to (vii)	(F) response equipment - a complete list of contracted or other oil discharge containment, control, cleanup, storage, transfer, lightering, and related response equipment to meet the applicable response planning standard, and to protect environmentally sensitive areas and areas of public concern that are identified in (J) of this paragraph and that may be reasonably expected to suffer an impact from a spill of the response planning standard volume as described in the response strategies developed under (1)(F) and (1)(I) of this subsection, the list must include (i) the location, inventory, and ownership of the equipment; (ii) the time frame for delivery and startup of response equipment and trained personnel located outside the facility's primary region of operation; (iii) the manufacturer's rated capacities, limitations, and operational characteristics for each item of oil recovery equipment, including any nonmechanical response techniques; (iv) each vessel designated for oil recovery operations, including skimming vessels and platforms and vessels designated to tow and deploy boom; (v) information on additional vessels available from other sources for oil recovery operations, including, if applicable, procedures for inventorying, training personnel, and equipping vessels; (vi) pumping, transfer and temporary storage, and lightering equipment for transferring oil from damaged or undamaged tanks; and (vii) the procedures for storage, maintenance, and inspection of spill response equipment under the immediate control of the operator when not in use, including procedures for periodic testing and maintenance of response equipment;	Section 3.6 Section 3.7 Section 1.5 Section 1.6
425(e)(3)(G)(i) to (v)	(G) nonmechanical response information - if a nonmechanical option such as dispersant use or in situ burning is proposed as a response option, the plan must include (i) a description of the specific mechanisms in place to assess the environmental consequences of the nonmechanical response option and to provide continuous monitoring of its environmental effects; (ii) a complete inventory of nonmechanical response equipment and supplies, including the type and toxicity of each dispersant, with procedures for storage, maintenance, and deployment; (iii) identification of all necessary approvals, and a completed application for department approval for open burning if in situ burning is a proposed response option; (iv) identification of all permits, approvals, or authorizations for use of nonmechanical response options and the timeline for obtaining them; and (v) a plan for protecting environmentally sensitive areas identified in (J) of this paragraph, areas of public concern identified in (J) of this paragraph, and the public from any adverse effects of the nonmechanical response option;	Section 3.8 Section 1.7
425(e)(3)(H)	(H) oil spill primary response action contractor information - if a plan holder proposes to use the services of an oil spill primary response action contractor to meet a requirement of AS 46.04.030 or 18 AAC 75.400 - 18 AAC 75.495, the contractor must be registered under 18 AAC 75.500 - 18 AAC 75.580; the plan holder shall include a correct and complete list of each primary response action contractor, with name, address, telephone number, and affiliation by company, the response contractor information described in 18 AAC 75.445(i), and a description of the response equipment and services provided; the use of an oil spill primary response action contractor does not relieve the plan holder of its responsibility to provide the information required by this subsection and to meet all other applicable requirements of 18 AAC 75.400 - 18 AAC 75.495;	Section 3.3 Section 3.9
425(e)(3)(I)	(I) training - a detailed description of the training programs for discharge response personnel;	Section 3.10

APPLICABLE REGULATIONS 18 AAC 75.	APPLICABLE REGULATORY DESCRIPTION	LOCATION IN THIS PLAN
425(e)(3)(J)(i)to (iii)	(J) protection of environmentally sensitive areas and areas of public concern - for a stationary facility or operation, or a railroad, and, if required by the department, for a vessel, identification of environmentally sensitive areas and areas of public concern that may suffer an impact from a spill of the applicable response planning standard volume; if identification of those areas and site-specific strategies for protection of those areas are in an applicable subarea contingency plan, the plan holder may incorporate that information by reference; whether prepared separately or incorporated by reference, the identification of and planned protection measures for those areas must be based on mapped predictions of discharge movement, spreading, and probable points of contact, based on expected local, seasonal, meteorological, and oceanographic or topographic conditions; and, for each probable point of contact, must include a description of each environmentally sensitive area and each area of public concern, including (i) the effect of seasonal conditions on the sensitivity of each area; (ii) a discussion of the toxicity effects and persistence of the discharge, based on type of product; and (iii) an identification of which areas will be given priority attention if a discharge occurs;	Section 3.11
425(e)(3)(K)	(K) additional information - other information necessary to provide background for or verification of the plan contents; and	
425(e)(3)(L)	(L) bibliography - a list of data and information sources used to determine the information contained in the plan; and	References
425(e)(4)	(4) PART 4 -- BEST AVAILABLE TECHNOLOGY REVIEW: Unless application of a state requirement would be preempted by federal law, the plan must provide for the use of best available technology consistent with the applicable criteria in 18 AAC 75.445(k). In addition, the plan must	Part 4 Best Available Technology Review
425(e)(4)(A)(i)(ii)	(A) identify technologies applicable to the applicant's operation that are not subject to response planning or performance standards specified in 18 AAC 75.445(k)(1) and (2); these technologies include, at a minimum, (i) for all contingency plans, communications described under (1) (D) of this subsection; source control procedures to stop the discharge at its source and prevent its further spread described under (1) (F) (i) of this subsection; trajectory analyses and forecasts described under (1) (F) (iv) of this subsection; and wildlife capture, treatment, and release procedures and methods described under (1) (F) (xi) of this subsection; (iii) for a tank vessel contingency plan: measures to assure prompt detection of an oil discharge as required by 18 AAC 75.027(d); operation of a tank vessel under escort in a manner that permits an escort vessel to be available immediately to provide the intended assistance to the tank vessel as required by 18 AAC 75.027(e); tow lines as required by 18 AAC 75.027(f); and escort vessels;	Sections 4.1 to 4.11
425(e)(5)	(5) Part 5 - Response Planning Standard: A calculation of the applicable response planning standard set out in 18 AAC 75.430 - 18 AAC 75.440 and 18 AAC 75.442, including a detailed basis for the calculation of reductions, if any, to be applied to the response planning standard.	Part 5: Response Planning Standard

Introduction

This manual contains the Oil Discharge Prevention and Contingency Plan (ODPCP) for XTO Energy Inc. (XTO) Middle Ground Shoal (MGS) facilities (Platforms A and C, Marine Flowlines and Onshore Facility). XTO is a wholly owned subsidiary of ExxonMobil Corp.

Regulatory Agency Requirements

This ODPCP was prepared to meet the state and federal regulatory requirements for an Oil Discharge Prevention and Contingency Plan including:

- State of Alaska Administrative Code for the Department of Environmental Conservation (ADEC) (18 AAC 75) covering all MGS facilities;
- Bureau of Safety and Environmental Enforcement (BSEE) regulations 30 CFR 254 cover the platforms and offshore portions of the MGS flowlines; and
- U.S. Department of Transportation (DOT) 49 CFR 194. DOT regulations (49 CFR 194) cover the onshore portions of the MGS flowlines.

This ODPCP:

- Demonstrates that XTO has the capabilities to effectively respond to any oil spill which might occur as a result of its production activities, in accordance with 18 AAC 75, Article 4;
- Provides readily accessible information and simple instructions about oil spill containment and cleanup activities to XTO personnel and contractors involved in production operations; and
- Meets the requirements of the Oil Pollution Act of 1990 (OPA 90) for a facility response plan.

Environmental Protection Agency (EPA) 40 CFR 112 requirements for onshore facilities are met by the Spill Prevention Control, and Countermeasures (SPCC) Plan maintained by XTO.

Plan Format and Organization

This plan generally follows the format outlined in the ADEC Application and Review Guidelines, July 1994.

The ODPCP is organized as specified in 18 AAC 75.425, as indicated:

- ADEC Certificates of Approval (once granted)
- Opening Pages - Includes a summary, Statement of Management Approval, and Record of Revisions;
- Introduction - Summarizes ODPCP distribution and updating procedures;
- Part 1 - Response Action Plan;
- Part 2 - Prevention Plan;
- Part 3 - Supplemental Information;
- Part 4 - Best Available Technology;
- Part 5 - Response Planning Standard; and
- Part 6 - References.

As a member of the Cook Inlet Spill Prevention and Response, Inc. (CISPRI) Cooperative, XTO incorporates by reference the *CISPRI Technical Manual* (CTM) in this ODPCP to provide additional detail about response capability.

This ODPCP also uses the *Spill Tactics for Alaska Responders Manual* (STAR) as a generalized support reference for tactical descriptions. This manual provides a standardized approach to referencing oil spill response tactics that are specific to the State of Alaska. This manual may be accessed online at <http://www.dec.state.ak.us/spar/perp/star/docs.htm>.

ODPCP Distribution

XTO maintains a master distribution log for all controlled copies to ensure that key ODPCP recipients receive revisions. Revised pages and updates are mailed to individuals who are assigned controlled copies. These users are responsible to incorporate revisions into their assigned manual and to ensure their controlled copy remains up-to-date. The revision log indicates the date of revision, the section, the page numbers, and a brief description of contents.

All suggested revisions and/or corrections should be sent to:

Environment, Health, and Safety Manager
XTO Energy Inc.
52260 Wik Rd.
Kenai, Alaska 99611
Telephone (907) 776-2510
Fax (907) 776-2542

All proposed changes to the plan will be submitted to the following agencies and addresses:

Industry Preparedness Program
Division of Spill Prevention and Response
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501-2617

Pipeline Response Plans Officer
Pipeline & Hazardous Materials Safety Administration
Department of Transportation
1200 New Jersey Avenue, S.E.
Washington DC 20590

Regional Supervisor, Field Operations
Bureau of Safety and Environmental Enforcement
3801 Centerpoint Drive, Suite 500
Anchorage, AK 99503

Agency approval letters are provided in the front of this ODPCP, under the tab labeled "Agency Approvals."

ODPCP Updates and Submittals

This ODPCP will be reviewed, updated, and submitted in accordance with the following timelines:

Agency	Minimum Review Period	Regular Revision Submittals	Periodic Revision Submittals	No. of Copies
ADEC (All facilities)	5 years	5 years	5 days	1
BSEE (Platforms A & C, Offshore Pipeline)	2 years	2 years*	15 days	2
DOT (Onshore Pipeline)	5 years	5 years	30 days	2

* If there were no modifications made during the biennial review, submit a letter to the Regional Supervisor stating that there were no changes.

If significant modifications are made to the ODPCP, revised copies will be submitted to the respective agencies within a reasonable time after the change has occurred. Modifications are considered significant if one or more of the following occurs:

- A revision to the list of names, addresses, or telephone numbers of spill command and response personnel;
- A revision to a training procedure or course work requirement that does not reduce the amount or quality of the required training;
- A change in which response capabilities are greatly reduced;
- A change occurs in the worst case discharge scenario or in the type of oil being handled, stored or transported at the facility;
- A change in the name(s) or capabilities of the oil spill removal organization(s);
- A significant change to the Area Contingency Plan;
- An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by a previously approved plan;
- Relocation or replacement of the pipeline in a way that substantially affects the information included in the response plan;
- A change to the type of oil transported (i.e. a change from crude oil to gasoline);
- A change to emergency response procedures;
- A change in the Qualified Individual; and
- Any other information that could significantly affect the implementation of the plan.

Facility Description

This plan covers XTO's offshore Middle Ground Shoal (MGS) facilities in Cook Inlet. The MGS facilities consist of two offshore oil platforms (Platform A and Platform C) and an onshore separation and processing facility located on the east side of Cook Inlet near Nikiski (Onshore Facility).

Platform A is located 6 miles from the Onshore Facility. Platform C is approximately 5 miles from the Onshore Facility. Platform A is located at latitude (b) (7)(F). Platform C is located at (b) (7)(F). The Onshore Facility is located approximately 22 miles northwest of Kenai at (b) (7)(F). The Onshore Facility is located at 52260 Wik Road. Kenai, AK 99611.

The combined daily production of Platforms A and C is approximately 2,800 barrels of oil per day (bopd). The produced gas is compressed and utilized for both gas lift and fuel gas. Flow lines "A", "B", and "C" are used to transport oil, gas, and water between Platforms A and C and the onshore facilities. Flowline "A" (A-Line) begins at Platform A and ends at a pig receiver located at the Onshore Facility. The A-Line segment is approximately 7 miles long. Flowline "B" (B-Line) is a flow line that begins at Platform A and ends at a pig receiver located at the Onshore Facility. The B-Line segment is approximately 7 miles long and runs parallel to A-Line. Flowline "C" (C-Line) begins at Platform C and ends at a subsea connection with the B-Line, adjacent to Platform A. The C-Line segment is approximately 2.3 miles long. In June 2005 the A-Line was converted to gas service, to bring fuel gas from onshore to Platforms A and C. Oil is transported from Platform C via the C-Line which connects into the B-Line at Platform A and continues to the Onshore Facility. If necessary, the A-Line can be returned to liquid hydrocarbon service. Block valve manifold systems installed at both platforms allow oil to be transported to shore through the "B" Line. There is approximately 1,400 ft of onshore pipeline running from Cook Inlet to the pig trap building. The oil is treated to remove produced water, and is transferred to the KPL pipeline through an onsite LACT unit. Produced water is treated and discharged to Cook Inlet under a National Pollutant Discharge Elimination System (NPDES) permit.

The Onshore Facility has three (b) (7)(F) and (b) (7)(F). Both platforms have onboard diesel fuel storage in the structural girders of the platform. Platform A has one on-deck tank and one girder tank currently in use. There are two shipping tanks and one girder tank, which are currently active on Platform C. The platform tanks vary in size with the largest being a girder tank on Platform C, (b) (7)(F). There are no crude oil storage structures on either platform.

Figures I-1 through I-4 provide a location map and fact sheets on XTO's MGS facilities.

Figure I-1 Location Map for XTO Cook Inlet Facilities

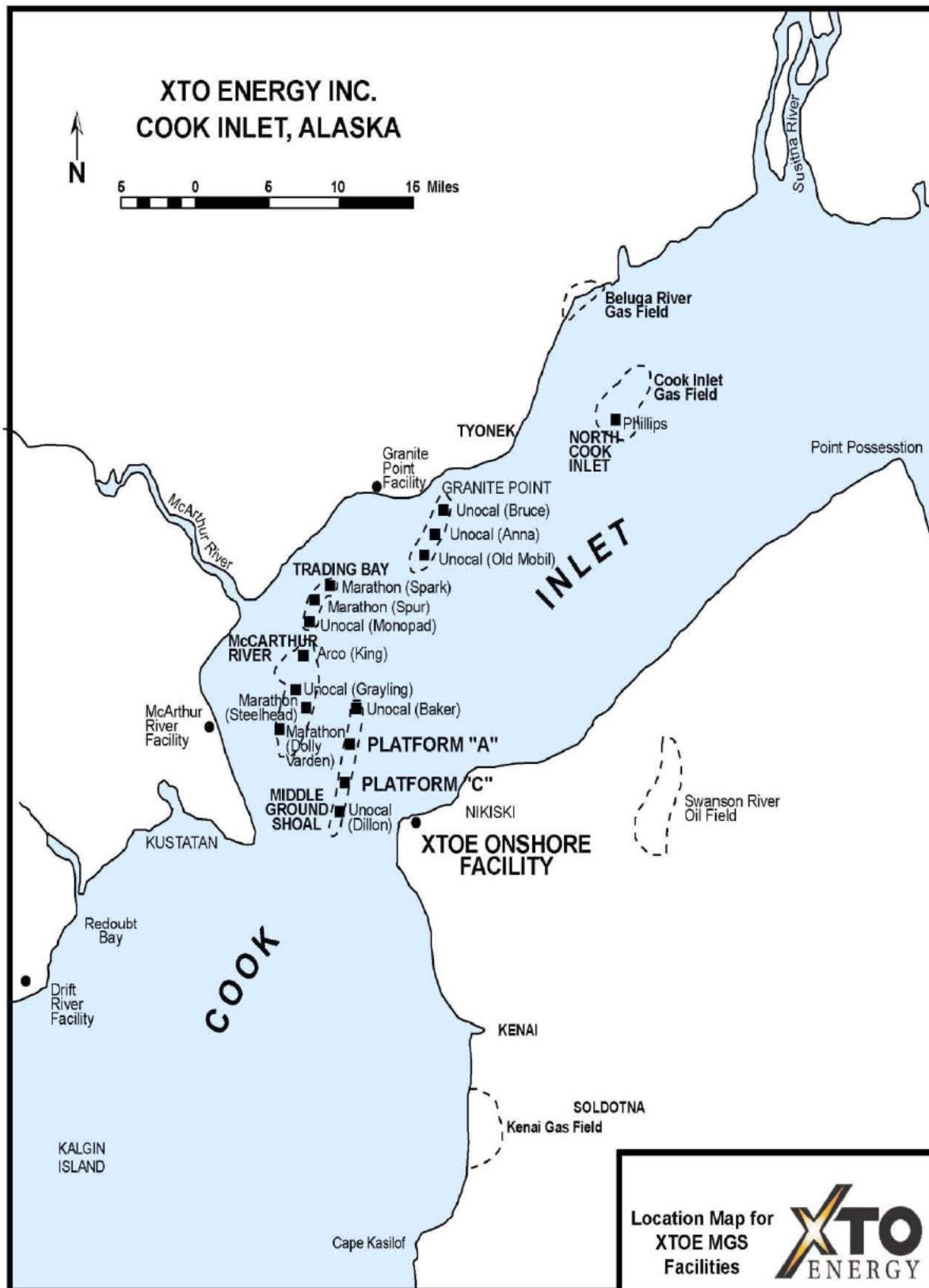


Figure I-2 XTO Platform A

Figure I-3 XTO Platform C

Figure I-4 XTO East Forelands “Onshore” Facility

PART 1	RESPONSE ACTION PLAN	1-1
1.1	EMERGENCY ACTION CHECKLIST	1-1
1.2	REPORTING AND NOTIFICATION.....	1-5
1.2.1	EXTERNAL NOTIFICATION PROCEDURES	1-5
1.2.2	XTO COMMAND CENTER	1-6
1.2.3	RESPONSE CONTRACTORS	1-6
1.3	SAFETY	1-12
1.4	COMMUNICATIONS.....	1-13
1.5	DEPLOYMENT STRATEGY	1-14
1.5.1	TRANSPORTATION OF PERSONNEL AND EQUIPMENT TO SPILL SITE	1-14
1.5.2	NOTIFICATION AND MOBILIZATION OF RESPONSE ACTION CONTRACTOR	1-15
1.5.3	SPILL RESPONSE SCENARIOS	1-15
1.5.4	WELL CONTROL PLAN	1-16
1.5.5	MARINE FLOWLINE SPILL SCENARIO.....	1-16
1.5.6	ONSHORE SURGE TANK SCENARIO	1-25
1.5.7	PLATFORM GIRDER TANK RELEASE SCENARIO	1-31
1.6	PLATFORM C WELL BLOWOUT	1-37
1.6.1	SUMMER CONDITIONS	1-37
1.6.2	WINTER CONDITIONS.....	1-46
1.7	NON-MECHANICAL RESPONSE OPTIONS	1-54
1.7.1	OBTAINING PERMITS AND APPROVALS	1-54
1.7.2	DECISION CRITERIA FOR USE	1-54
1.7.3	IMPLEMENTATION PROCEDURES.....	1-54
1.7.4	REQUIRED PERSONNEL AND EQUIPMENT	1-54
1.8	FACILITY DIAGRAMS	1-55

TABLES

TABLE 1.1-1	INITIAL SPILL RESPONSE AND NOTIFICATION PROCESS FOR SPILL RESPONSE	1-3
TABLE 1.1-2	ROLES OF ON-SCENE PERSONNEL (OIL OR CHEMICAL SPILL).....	1-4
TABLE 1.2-1	AGENCY NOTIFICATION REQUIREMENTS FOR SPILLS: OIL, PRODUCED WATER, SEWAGE, CHEMICALS, SEAWATER, ETC.....	1-9
TABLE 1.5-1	INITIAL CONDITIONS, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-16
TABLE 1.5-2	RESPONSE STRATEGY, MGS MARINE FLOWLINE LEAK TO OPEN WATER.....	1-17
TABLE 1.5-3	MAJOR EQUIPMENT AND STAFFING FOR RECOVERY TASK FORCES, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-22
TABLE 1.5-4	MASS BALANCE CALCULATIONS, MGS MARINE FLOWLINE LEAK TO OPEN WATER	1-23
TABLE 1.5-5	OIL TO BE RECOVERED, MGS MARINE FLOWLINE LEAK TO OPEN WATER.....	1-23
TABLE 1.5-6	MGS MARINE FLOWLINE LEAK TO OPEN WATER, OIL RECOVERY TIMELINE	1-24
TABLE 1.5-7	ONSHORE SURGE TANK FAILURE SCENARIO.....	1-25
TABLE 1.5-8	MASS BALANCE CALCULATIONS	1-28
TABLE 1.5-9	RECOVERY AND HANDLING CAPABILITY	1-28
TABLE 1.5-10	MAJOR EQUIPMENT AND STAFFING FOR RECOVERY TASK FORCES	1-29
TABLE 1.5-11	ONSHORE SURGE TANK FAILURE SCENARIO, TIMELINE DEPICTING RECOVERY CAPABILITY*	1-29
TABLE 1.5-12	INITIAL CONDITIONS, PLATFORM GIRDER TANK RELEASE	1-31
TABLE 1.5-13	RESPONSE PLAN, PLATFORM GIRDER TANK RELEASE	1-32
TABLE 1.5-14	PLATFORM GIRDER TANK RELEASE, OIL RECOVERY TIMELINE	1-36
TABLE 1.6-1	INITIAL CONDITIONS – PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS.....	1-37

TABLE 1.6-2	RESPONSE STRATEGY, PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS	1-38
TABLE 1.6-3	MGS PLATFORM C BLOWOUT SCENARIO – OIL RECOVERY TIMELINE – SUMMER CONDITIONS	1-43
TABLE 1.6-4	SPILL RESPONSE RESOURCES – PLATFORM C WELL BLOWOUT – SUMMER CONDITIONS.....	1-45
TABLE 1.6-5	CONDITIONS, PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-46
TABLE 1.6-6	RESPONSE STRATEGY, PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-47
TABLE 1.6-7	MGS PLATFORM C BLOWOUT SCENARIO – OIL RECOVERY TIMELINE – WINTER CONDITIONS	1-51
TABLE 1.6-8	SPILL RESPONSE RESOURCES – PLATFORM C WELL BLOWOUT – WINTER CONDITIONS.....	1-53

FIGURES

FIGURE 1.1-1	EMERGENCY ACTION WALLET CARD	1-2
FIGURE 1.2-1	XTO ALASKA OPERATIONS SPILL REPORT FORM (AGENCY NOTIFICATION).....	1-7
FIGURE 1.2-2	SPILL NOTIFICATION SEQUENCE.....	1-8
FIGURE 1.2-3	ADEC OIL AND HAZARDOUS SPILL PLACARD.....	1-11
FIGURE 1.5-1	ONSHORE FACILITY SURGE TANK RUPTURE SCENARIO – SIMULATED OIL TRAJECTORY	1-30
FIGURE 1.6-1	SUMMER OIL SPILL TRAJECTORY AT HOUR 72	1-42
FIGURE 1.6-2	WINTER OIL SPILL TRAJECTORY AT HOUR 72	1-50
FIGURE 1.8-1	XTO COOK INLET FACILITIES	1-56
FIGURE 1.8-2	PLATFORM A FUEL TRANSFER SCHEMATIC	1-57
FIGURE 1.8-3	PLATFORM C FUEL TRANSFER SCHEMATIC.....	1-58
FIGURE 1.8-4	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (1 OF 4).....	1-59
FIGURE 1.8-5	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (2 OF 4).....	1-60
FIGURE 1.8-6	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (3 OF 4).....	1-61
FIGURE 1.8-7	XTO ON-SHORE FACILITY PROCESS FLOW SCHEMATIC (4 OF 4).....	1-62

PART 1 RESPONSE ACTION PLAN

This ODPCP will be initiated when an oil spill occurs or when there is an imminent threat of an oil spill. The plan gives the framework for the mobilization of personnel from Fort Worth, Midland or other corporate offices to support operations in Alaska.

1.1 Emergency Action Checklist

Any person (employee or contractor) who causes or observes a spill will immediately report the spill to their supervisor or facility Person-in-Charge (PIC), who will then activate the Immediate Emergency Response Team (onsite) and report up to the Qualified Individual (QI). This representative will then ensure that the appropriate internal contacts and agencies groups are notified, and activate CISPRI, as necessary.

Figure 1.1-1 presents an emergency action checklist to address emergency response and initial reporting in the event of spill. Table 1.1-1 and 1.1-2 present an Emergency Action Response Checklist and the Roles of XTO Facility Personnel.

Small spills will be contained and removed by XTO employees and contract personnel on-scene. In the event of a spill beyond the capability of on-scene personnel, the Qualified Individual (QI) will immediately activate CISPRI, XTO's response action contractor to provide the response. The QI is available on a 24-hour basis and has full authority to activate and contract with CISPRI as well as the authority to dedicate all funds as required.

The QIs for XTO Energy are identified by name in Appendix B and by position as follows:

- Production Superintendent (907) 776-2506
- Production Foreman (907) 776-2540
- Environment, Health, and Safety Manager (907) 776-2510

Figure 1.1-1 Emergency Action Wallet Card**Front of Card**

Emergency Response Actions	
1. Safety is top priority. Evaluate hazards and do not take risks. 2. Report to your immediate supervisor. If your immediate supervisor is unavailable, notify the designated Qualified Individual (QI) or alternate QI. 3. Communicate the information listed on reverse of this card. 4. If necessary, raise the alarm and evacuate to a secure area. 5. If trained responder and safely possible: • Determine the spill source and product involved; • Turn off electrical other sources of ignition; • Stop the spill at its source; and • Contain the spill.	
QI #	776-2506 / 398-7108
Alt QI#	776-2510 / 398-1233

Back of Card

Report Spills Promptly	
1. Anyone hurt? 2. Where spilled? 3. What was spilled? 4. Spill source? 5. Estimated spill volume and surface area covered? 6. Rate of release? 7. Time and date of spill? 8. What is the situation status? 9. Actions taken so far and next steps you recommend? 10. Equipment on-site and any needed? 11. What type of receiving environment and immediate or threatened impacts? 12. Current Weather?	
QI #	776-2506 / 398-7108
Alt QI#	776-2510 / 398-1233

Table 1.1-1 Initial Spill Response and Notification Process for Spill Response

	EMERGENCY ACTION RESPONSE CHECKLIST
FIRST PERSON TO SIGHT SPILL	<i>Immediately notify the Facility Supervisor. Take steps to protect people as a first priority only if there is an imminent danger of injury or fatality and it can be safely performed.</i>
FACILITY SUPERVISOR Or PERSON-IN-CHARGE (PIC) (INITIAL ON-SCENE INCIDENT COMMANDER)	- Initiate control operations: ☐ Determine the source of the spill; ☐ Turn off electrical power and all other sources of ignition from a safe location; ☐ Close all flow lines leading to the problem area; ☐ If the cause is determined to be a pipeline leak, initiate shut-in procedures; and ☐ Close all drains and valves, <i>if necessary or safe to do so.</i> - Account for all personnel and ensure their safety. Assess the relative safety of the situation and all personnel. Determine if respiratory protection and other personal protective equipment (PPE) is required (coordinate with Safety Officer). - Determine the possibility of an explosion or fire. - 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; ☐ Tidal stage (ebb, flood or slack); · ☐ Sea state; ☐ Ice conditions; and ☐ Slick movement direction.
NOTIFICATIONS	- The following notifications are to be initiated by the Facility Supervisor or his designee: ☐ Notify the Qualified Individual (QI); ☐ Fill out the Initial Spill Report form; and ☐ Fax the completed Initial Spill Report form to the QI and ADEC (subject to Approval by the Production Superintendent).
QUALIFIED INDIVIDUAL	- Determine extent of spill and additional resources required; - Assume control of the spill response activities and implement necessary actions; - Activate CISPRI and the IMT (as needed). Ensure Agency notifications are completed through the Liaison Officer; and - Coordinate with the State On-Scene Coordinator (SOSC) and Federal On-Scene Coordinator (FOSC) to set up a Unified Command for spill management.

Table 1.1-2 Roles of On-scene Personnel (Oil or Chemical Spill)

OIL OR CHEMICAL SPILL		
Role	Checklist	Tasks
Person-in-Charge (PIC)	☐ ☐ ☐ ☐	1. In command of all operations at facility. Assess the spill situation; initiate immediate control measures and determine need for additional support. Direct all personnel. 2. Assess the relative safety of the situation and all personnel. Determine if respiratory protection and other PPE is required (coordinate with Safety Officer). 3. Notify the Production Superintendent. 4. Complete spill report form.
Safety Officer	☐ ☐ ☐	1. Provide support to on-scene operators and foremen in proper safety procedures. 2. Assist in identification of substance spilled and of PPE required. 3. Monitor cleanup.
Production Operator (On Duty)	☐ ☐	1. Report to scene of spill. 2. In charge at scene of spill.
Production Operator (Off Duty)	☐ ☐ ☐	1. Report to scene of spill. 2. Report to PIC over rig phone. 3. Assist at scene of spill.
Mechanic (On Duty)	☐ ☐	1. Report to scene of spill. 2. Maintain electric power and water pressure as needed.
Mechanic (Off Duty)	☐ ☐	1. Report to scene of spill. 2. Assist as needed.
Electrician/Instrument Technician	☐ ☐ ☐	1. Stand by at scene of spill to assist if needed. 2. Assist at scene of spill. 3. Maintain electrical power as ordered by Production Superintendent.
Wireline Operator	☐ ☐	1. Report to scene of spill. 2. Assist as needed.
Crane Operator (and crew)	☐ ☐	1. If no gas alarm sounds, continue normal duties unless ordered otherwise. 2. If gas alarm sounds, report to recreation room with float coat or float suit and with escape air pack. USE OUTSIDE STAIRS. Alternate reporting area: Whittaker (as ordered).
Cook/Bull Cook	☐ ☐ ☐ ☐	1. If no gas alarm sounds, continue normal duties unless ordered otherwise. 2. If gas alarm sounds, secure galley and continue Steps 3 and 4. 3. Wake all sleeping personnel. 4. Report to recreation room with float coat or suit and with escape air pack. Alternate reporting area: Whittaker (as ordered).
Drilling Personnel	☐ ☐	1. If no gas alarm sounds, secure rig and suspend operations until directed to continue by PIC. 2. If gas alarm sounds, don SCBA, secure drilling operations, and report to recreation room with float coat or suit and with escape air pack. Alternate reporting area: Whittaker (as ordered).
Temporary Personnel (XTO and Contract)	☐ ☐	1. If no gas alarm sounds, continue normal duties unless ordered otherwise. 2. If gas alarm sounds, report to recreation room with float coat or suit and with escape air pack. USE OUTSIDE STAIRS. Alternate reporting area: Whittaker (as ordered).
Onshore Production Operators (For spill at Onshore Facility)	☐ ☐ ☐ ☐ ☐	1. Assess the relative safety of the situation and all personnel. 2. Attempt to stop source and take initial containment actions; determine if evacuation is required. 3. Notify the Production Superintendent to activate response contractor as necessary. 4. Complete spill report form (with Production Superintendent or EHS Manager). 5. Man radios and handle external communications.

1.2 Reporting and Notification

XTO's reporting and notification requirements vary depending on the type of material spilled, the size of the spill, location, and required response.

A minor spill is defined as a situation where on-site employees do not require assistance to accomplish emergency response operations, and the situation is not an emergency.

An emergency situation exists when any of the following conditions exist:

- safety and health of any personnel is threatened; or
- the spilled material is of an unknown nature and is potentially hazardous or toxic; or
- the release of product cannot be quickly stopped or contained.

XTO defines spill situations by the type of response needed, which apply only to the emergency phases of containment and initial recovery, as described below:

Tier III Event: A major event with national or global implications. The potential public and environmental exposure is truly significant. Maximum XTO and third-party resources must be brought to bear to control and correct the problem. Governmental involvement and media interest will be intense. The risk of a Tier III event in Alaska Operations is very limited. One possible Tier III Event at MGS could be a platform collapse due to ship collision or major fire.

Tier II Event: An event with regional implications (at a minimum). The potential public and environmental exposure is of significant concern. Local XTO resources may have to be supplemented with third-party and Lower 48 XTO resources to manage the event. Governmental involvement and media interest will be moderately high but primarily at the regional level. An example would be a pipeline break in Cook Inlet, or a well control incident, resulting in significant crude losses.

Tier I Event: An event with state and local implications. The potential public and environmental exposure is moderate. The problem can be primarily corrected with local resources with some third-party resources. Governmental involvement and media interest will be moderately high but restricted to the state and local level. An example would be a crude oil tank spill at the Onshore Facility.

Major Safety Event: Any incident involving a fatality, a probable permanent disability, or multiple serious injuries to company or contract employees or the public and associated with company-controlled operations or facilities. A separate notification procedure is required for major safety events, with the intention of ensuring immediate notification of senior management for serious incidents.

For ease of reference, a copy of the XTO Incident Management Team reporting and notification list is located in Appendix A of this ODPCP along with an ICS organization chart. The XTO Liaison Officer (or individual designated by the Incident Commander) is responsible for communication with government agencies during spill response operations.

1.2.1 External Notification Procedures

It is XTO's policy that employees and contractors report all spills of oil or hazardous material, regardless of size. It is the responsibility of the XTO PIC or EHS Manager to fill out the spill report form found in Figure 1.2-1 and provide it to his or her designee as soon as possible after the initial verbal notification.

The designated person will use this form to complete a written notification to the ADEC and XTO management. The Production Superintendent will approve the agency notification form before timely delivery to ADEC. Additional XTO internal reports concerning oil or chemical spills are made according to the Continental Companies Performance Standard. It is essential that the proper government notifications be made for any spill. Figure 1.2-2 provides a summary of the initial notification procedure, including the government agencies to be contacted in the event of a spill at a MGS facility. Table 1.2-1 provides a summary of the spill reporting requirements of various government agencies. Figure 1.2-3 is a placard listing notification requirements for spill reporting to ADEC. This placard will be posted at each work site and will be included in orientation and training.

1.2.2 XTO Command Center

For an oil spill requiring activation of CISPRI, a Tier II or III Spill, the CISPRI Command Center is Nikiski may be used for the XTO response. If members of the Major Response Team from Houston are activated, they will report to the CISPRI command center. Once at the command center, team members will coordinate with their CISPRI counterparts.

The CISPRI Response Center is physically located in Nikiski at:

Address/Location:	CISPRI Response Center Milepost 26.5 North Spur Highway P.O. Box 7314 Nikiski, AK 99635
Telephone Number:	(907) 776-5129 (24-hour Hotline)
Fax Number:	(907) 776-6040

A layout of the Command Center is provided in Figure 3.3-1. A location map for XTO's Kenai Office and Onshore Facility are provided in Figure 3.3-2

1.2.3 Response Contractors

The Response Contractors are:

Cook Inlet Prevention & Response, Inc.

Address, location and contact numbers provided above in Section 1.2.2.

Witt O'Brien's

Address/Location:

Millionaire Hangar
6160 Carl Brady Drive
Anchorage AK 99502

24 Hr Emergency Telephone Number:

(985) 781-0804

AK Telephone Number

(907) 550-8526

Fax Number:

(907) 550- 8502

Web Address:

www.wittobriens.com

Figure 1.2-1 XTO Alaska Operations Spill Report Form (Agency Notification)

Form EP-1 (Revised 1/95)		ADEC Spill ID Number:	
Location and Source of Spill		Date/Time of Spill	
Latitude/Longitude: ° ' " ° ' "		Start:	
		Stop:	
Material Spilled (oil, oil/produced water)		Amount Spilled (how estimated)	
Person Reporting Spill		Cause of Spill	
Receiving Surface (Gravel fill, Cook Inlet, Stream, Platform surface, etc.)			
Description of Area Affected (Area extent; environmental effects, if any--DO NOT SPECULATE):			
Agencies Notified (Person's name/time/date):		DOT:	
EPA:		BSEE:	
ADEC:		AOGCC:	
Nikiski Fire Department:		USCG:	
ADNR:		Local Emergency Planning Commission:	
Immediate Cleanup Actions Taken		Follow-up Cleanup Actions Taken (or in progress)	
Damage to or Loss of Equipment		Status of any Injured Personnel	
Estimated Volume or Percent of Spill Recovered		Date, Location, Method of Disposal (ADEC approval required)	
Actions Taken to Prevent Recurrence			
Comments			
Report Prepared by (Signature)		Date Report Prepared	

cc: Environment and Safety Director, FTW

(b) (7)(F)

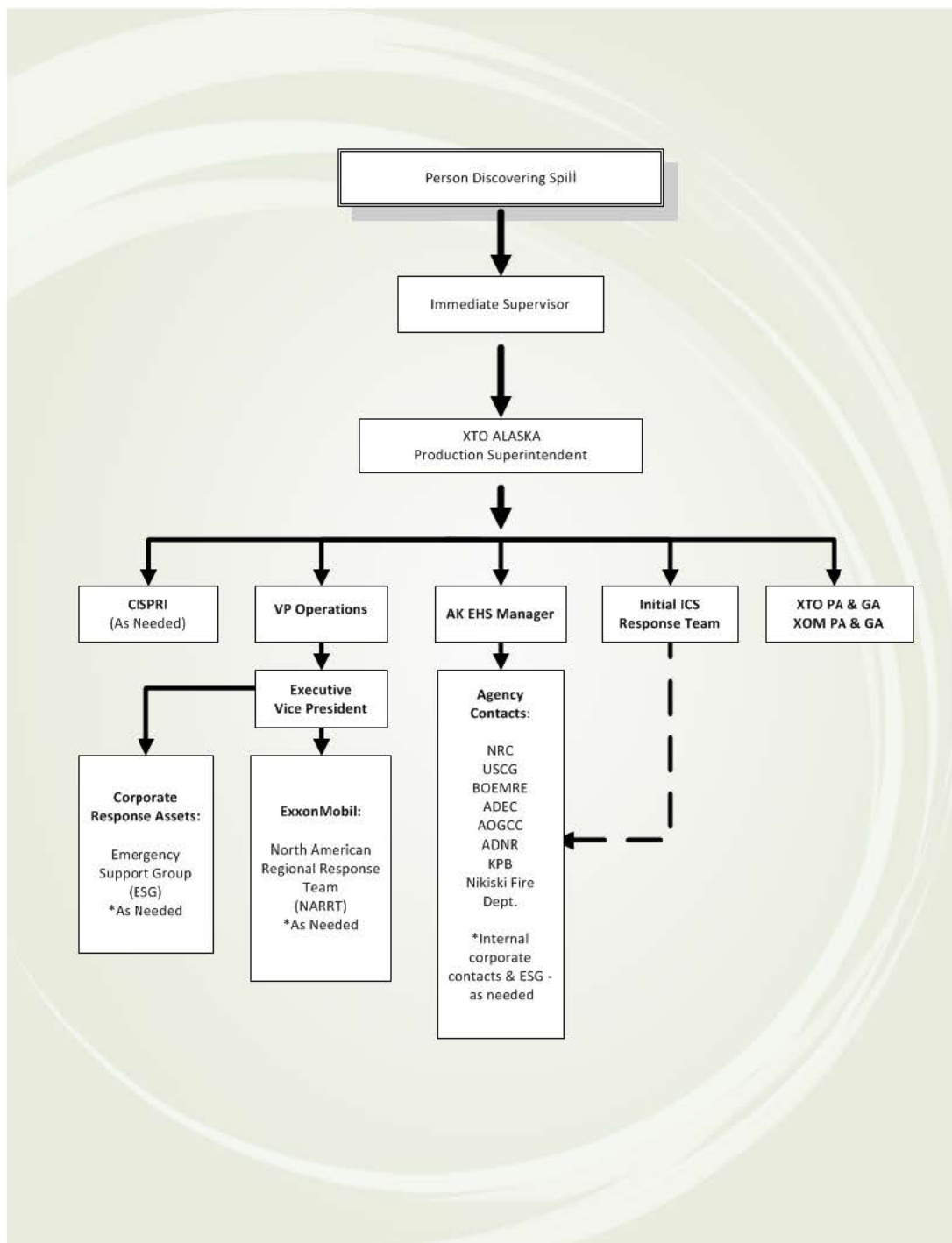
Figure 1.2-2 Spill Notification Sequence

Table 1.2-1 Agency Notification Requirements for Spills: Oil, Produced Water, Sewage, Chemicals, Seawater, etc.

Agency	Spill Size/Type	Verbal Report	Written Report
U.S. Coast Guard (all spills) 24 hr (907) 271-6700 Local (907) 283-3606	Any size in or threatening navigable waters	Immediately	Written report may be required for larger spills
National Response Center 1-800-424-8802	Any size in or threatening navigable waters	Immediately	Written report may be required for larger spills
U.S. BSEE (907) 334-5300	Spills 1 barrel or larger	Immediately	Copy of all follow-up incident reports
Alaska Department of Environmental Conservation (in state waters or threatening state waters) 24 hr (800) 478-9300 Local (907) 269-3063	Any spill to state waters Land spills: >55 gal. (outside impermeable area) >55 gal. (inside impermeable area) 10 to 55 gal.	Immediately Immediately Within 48 hours Within 48 hours	Within 15 days of end of cleanup
Alaska Oil and Gas Conservation Commission (wells within state waters only) 24hr (907) 279-1433	All spills from wells in state (Alaska produced crude)	Immediately	Within 5 days of end of cleanup
Alaska Department of Natural Resources 24 hr (907) 451-2678	Crude spills >2 bbl; all explosions, fires, and discharges of toxic or hazardous substance	Immediately	Copy of all follow-up incident reports
U.S. Department of Transportation	Spills that occur offshore or onshore where a loss of hazardous liquid could reasonably be expected to pollute any stream, river, lake or other body of water	As soon as practicable	Not later than 30 days
State Emergency Planning Commission Local Emergency Planning Committee (Kenai Peninsula Borough) Nikiski Fire Service Area	Spill of any extremely hazardous substance greater than the reportable quantity that leaves or is likely to leave the facility boundary (SARA Title III reporting)	Immediately	Written report upon request.
Cook Inlet Regional Citizens Advisory Council (CIRCAC) (907) 283-7222	Large spills threatening the Cook Inlet watershed.	As soon as practicable	Written report upon request.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

Figure 1.2-3 ADEC Oil and Hazardous Spill Placard

IT'S THE LAW!
AS 46.03.755 and 18 AAC 75.300

REPORT OIL AND HAZARDOUS SUBSTANCE SPILLS

During Normal Business Hours
call the nearest response team office:

Central Alaska: Anchorage	(907) 269-3063 Fax: (907) 269-7648
Northern Alaska: Fairbanks	(907) 451-2121 Fax: (907) 451-2362
Southeast Alaska: Juneau	(907) 465-5340 Fax: (907) 465-2237

Outside Normal Business Hours

Toll Free	1-800-478-9300
International	1-907-428-7200

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

Oil – Petroleum Products

To Water

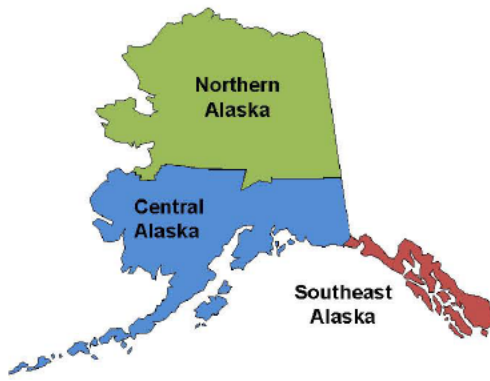
- Any amount spilled to water must be reported immediately.

To Land

- Spills in **excess of 55 gallons** must be reported immediately.
- Spills in **excess of 10 gallons, but 55 gallons or less**, must be reported within 48 hours after the person has knowledge of the spill.
- Spills of **1 to 10 gallons** must be recorded in a spill reporting log submitted to ADEC each month.

To Impermeable Secondary Containment Areas

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





**Alaska Department of
Environmental Conservation**
Division of Spill Prevention and Response
www.dec.alaska.gov/spar/spillreport.htm

Additional Requirements for Regulated Underground Storage Tank Facilities
Regulated Underground Storage Tank (UST) facilities are defined at 18 AAC 78.005 and do not include heating oil tanks.

If your release detection system indicates a possible discharge, or if you notice unusual operating conditions that might indicate a release, you must notify the ADEC UST Program within 7 days.

UST Program: (907) 269-3055 or 269-7679

rev. Feb./2013

1.3 Safety

Personnel safety is the highest concern during spill incident planning and response. No response actions will be undertaken unless safety is ensured. Specific steps to be followed are listed below.

- Ensuring that explosion and fire hazards are removed. Combustible gas detectors and other instrumentation will be used to ensure that a spill site is safe for entry.
- Using personnel protective equipment (PPE) that is appropriate for the incident.
- Assuring that response personnel are properly trained in safety procedures and the use of PPE. Personnel who might work on spill response must receive Occupational Safety and Health Administration (OSHA)-mandated spill response and respirator training.
- If an accident occurs during a response or a drill, XTO will investigate and document its causes.

XTO Safety Work Permit procedures govern work at XTO facilities including spill response. These procedures ensure safe work practices, as each job is fully evaluated before the work begins. XTO conducts all operations in accordance with the applicable regulations of the federal OSHA and the State of Alaska Department of Occupational Safety and Health (AKOSH).

All responses to oil and chemical spills will be conducted in accordance with the requirements of federal regulations in 29 CFR 1910.120 regarding emergency response and hazardous waste operations (including post-emergency cleanup of spills) - known as HAZWOPER. No one will enter an oxygen-deficient or toxic atmosphere unless confined-space entry procedures are followed. The primary substances of concern at MGS facilities are crude oil, produced gas, and diesel fuel.

The material safety data sheet (MSDS) for spilled material is consulted to determine the proper PPE. MSDS sheets are available at each XTO location either in printed copy or on computer database. Self-contained breathing apparatus (SCBA), chemical resistant clothing, hard hats, safety glasses, and other protective equipment (available at both platforms and the onshore facility) will be used as appropriate. The XTO Safety Officer (SO) and PIC will identify the hazardous substances present and will determine maximum exposure limits and procedures for handling the substances. They will contact Chemtrec as necessary for information on handling chemical exposures. They will also determine the appropriate level of protection and the applicability of any monitoring or engineering controls for limiting exposure of personnel. Furthermore, they will arrange for coverage by emergency medical services for quick response to any accident occurring during an emergency response operation. The SO has authority to shut down cleanup operations if an imminent danger to personnel arises.

Both XTO platforms maintain SCBA and portable gas detectors. Each platform and the Onshore Facility have fixed gas, hydrogen sulfide, and fire detectors in areas that might contain hydrocarbons. At least one SCBA and one portable gas detector are maintained at the Onshore Facility. This PPE and gas detection equipment is designated for emergency response only and not for site assessment and air monitoring during a spill cleanup. CISPRI will provide PPE and gas detection equipment for a spill response.

Emergency response personnel engaged in a spill involving an inhalation hazard will wear positive-pressure SCBA until the XTO PIC or SO determines through air monitoring that a decreased level of respiratory protection will not result in hazardous exposures. All PPE used will meet state and federal regulatory requirements.

The XTO SO reports directly to the XTO Incident Commander. The SO will monitor all cleanup activities, and an alarm system will be established to warn response personnel of dangerous conditions such as a buildup of vapors or a fire. For a post-emergency response, he/she will develop the site safety plan (CISPRI Technical Manual, Safety Tactics CI-S-2 and Appendix C).

The XTO SO and/or the XTO Operations Section Chief will determine the proper decontamination procedures for equipment and protective clothing. The MSDS for the substance spilled will be consulted, and the product's manufacturer contacted as necessary.

The CISPRI Technical Manual contains a series of Safety tactics including:

- CI-S, Safety Tactics (Cover Page);
- CI-S-1, Site Entry Procedures and Site Characterization;
- CI-S-2, Site Safety Plan Development;
- CI-S-3, Personal Protective Equipment (PPE);
- CI-S-4, Site Control;
- CI-S-5, Personnel Decontamination (Typical – Dry); and
- CI-S-6, Personnel Decontamination (Emergency).

1.4 Communications

A well-planned communications system is essential in order to respond quickly and efficiently to an emergency. XTO's communications system will allow the XTO Incident Commander and Operations Section Chief to direct and control XTO personnel throughout the course of response operations, as well as maintain communications with government agencies, contractors, and others involved in response operations. The following XTO communications equipment is available:

- Microwave multi-telephone link at each of XTO's facilities;
- 55-channel marine transceivers at XTO's Platforms A and C and on the supply vessel;
- Portable VHF radios for Incident Commander and Operations Section staff (153.080 megahertz (MHz); frequency also available on XTO-chartered helicopter; and
- Company issued cell phones.

The Logistics Section Chief is responsible for setting up communications. For everyday logistics, a microwave telephone system will be used which links the two platforms with the public switched telephone network.

When the XTO Initial Emergency Response Team is activated, the portable VHF radios will be assigned to the following XTO response team personnel:

- Incident Commander;
- Operations Section Chief;
- Platform A; and
- Platform C

Because of the restricted area involved at the facilities themselves, verbal communication will be adequate for minor emergencies at XTO's facilities. In the event of an oil spill into Cook Inlet, the Communications Unit Leader will be dispatched to the CISPRI command center in Nikiski to assist in establishing communications. The CISPRI Technical Manual (CTM) Tactic CI-LP-2 contains a detailed description of CISPRI communications equipment, which consists of the following:

- Telephone communications (including 800 MHz trunked radio telephones);
- Wide area VHF logistics oil spill radio network;
- VHF marine radio network;
- VHF ground-to-air radio network;
- HF radio network; and
- Emergency radio links with State of Alaska (155.296 MHz), U.S. Coast Guard (USCG) (4125 KHz and marine 16 and 22A), Kenai Peninsula Borough (155.085 MHz Rx, 154.085 MHz Tx), and with CISPRI member companies (multi-channel VHF and UHF contingency base station).

The CISPRI multi-channel VHF and UHF contingency base station will be used to maintain communications with XTO Operations Section personnel with portable VHF radios.

At all times, contact between the Operations Section Chief and the Incident Commander and government authorities will be maintained by radio or telephone. A log of all communications will be maintained by all XTO personnel and coordinated by the Communications Unit Leader.

1.5 Deployment Strategy

1.5.1 Transportation of Personnel and Equipment to Spill Site

CISPRI personnel and contractors will respond to any spill in Cook Inlet by vehicles, vessels, helicopter, or fixed-wing aircraft. Typical response times for mobilization and deployment of personnel and equipment are detailed in the Logistics and Planning Tactics of the CTM - Tactics CI-LP through CI-LP-6.

Tactic CI-LP-1(B) *Response and Deployment Assumptions* specifically addresses the mobilization of in-region personnel that may be needed. Additional information to access contract, non-obligated and out-of-region resources is provided in Tactic CI-LP-3.

Response times for the Oil Spill Response Vessel (OSRV) and Offshore Supply Vessels (OSVs) to mobilize to sites within Cook Inlet are provided in CTM Tactic CI-LP-1 (A). This tactic provides travel times for marine, aviation, and land-based response assets. Tactic CI-LP-5 provides a description of CISPRI's Contracted Vessel Program. The tactic contains information on the program's administration, required training, and vessel activation, classification, and availability.

XTO personnel onboard the platforms will handle source control work, so that transporting additional response personnel to the platforms during a spill should not be necessary. Nonetheless, transportation will be available via either the shared supply vessel or the XTO-chartered helicopter. Timetables for the activation of each major piece of spill response equipment and alternative methods available during adverse weather conditions are described in the CTM Logistics and Planning Tactics. Specific information is available in Table 3.6-1 under Section 3.6 of this Plan.

1.5.2 Notification and Mobilization of Response Action Contractor

The following initial response actions would be taken for any spill at an MGS facility:

- Turn off electrical power and all other ignition sources if disconnection is not a hazard;
- If safe to do so, close valves, shut down transfer pumps, or take other actions that will immediately stop the spillage of oil; and
- Deploy on-site sorbent material to mitigate the threat of any oil entering water.

In the event additional response resources are needed, the XTO QI in Nikiski is responsible for immediate notification and activation of CISPRI in the event of an oil spill exceeding the response capabilities of XTO on-site personnel. Such mobilization would be made quickly via CISPRI's 24-hour emergency telephone number (see Section 1.2)

In the event of a prolonged response where XTO's IMT may need to be supplemented or relieved by additional staff, the QI will activate Witt O'Brien's via their 24-hr response line (see section 1.2)

Mobilization of response assets are detailed in the Logistics and Planning CTM Tactics CI-LP to CI-LP-6. Tactic CI-LP-4 and Appendix A (App-A-1) of the CTM contain an inventory of CISPRI response assets and relevant staging or storage location. Typical transportation times for CISPRI response vessels and equipment to the XTO MGS facilities would range from 0.5 to 12 hours dependent upon the vessels or equipment to be deployed. (Also reference Section 3.5 and 3.6 for additional information on logistics and mobilization of response equipment.)

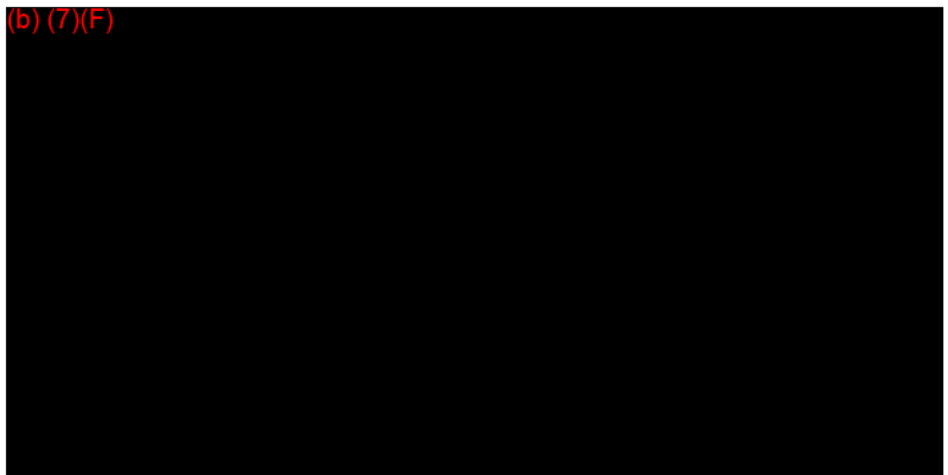
1.5.3 Spill Response Scenarios

The spill response scenarios in this ODPCP are designed to address the maximum possible discharge, as further defined in Part 5, that could occur at XTO Middle Ground Shoal facilities.

Tables 1.5-1 through 1.5-14 and Tables 1.6-1 through 1.6-8 identify and demonstrate strategies to respond to spill scenarios established for the XTO MGS facility response planning standards:

- Flowlines to shore:
- Onshore Facility:
- Platform C:
- Platform C:
- Platform C:

(b) (7)(F)



Each of the scenarios presented in the tables covers the following response strategies as appropriate.

- (i) Stopping the Discharge
- (ii) Preventing or Controlling Fire Hazards
- (iv) Surveillance and Tracking of Oil and Shoreline Contact Points
- (v) Exclusion Procedures
- (vi) Spill Containment and Control Actions
- (vii) Spill Recovery Procedures
- (viii) Lightering Procedures
- (ix) Transfer and Storage of Recovered Oil/Water; Volume Estimating
- (x) Plans, Procedures, and Locations for Temporary Storage and Disposal
- (xi) Wildlife Protection Plan
- (xii) Shoreline Cleanup Plan

1.5.4 Well Control Plan

XTO maintains that a relief well would not be necessary to control an MGS well. Most of XTO's wells cannot flow to surface without the assistance of gas lift or hydraulic lift. Only a few wells on Platform C can produce oil to surface unassisted. The unassisted oil flow rate for these wells is very low and declining as the reservoir pressure declines. XTO's engineers estimate that the worst-case well control situation would be from a Platform C well, in which about 70 bbl of oil is unloaded from the tubing, dissipating to less than 5 bbl of oil per day once gas lift is shut-down. It is expected that drilling or production engineers would be able to rapidly gain control of the well by surface control or well capping procedures. In the extremely unlikely event that a relief well would be necessary to control a Platform C well, a relief well could be attempted from Platform A. XTO maintains a contract with well control expert, Wild Well Control. In the unlikely event that a blowout occurs, XTO would implement its Blowout Contingency Plan. This plan is made available for review to ADEC upon request.

1.5.5 Marine Flowline Spill Scenario

Table 1.5-1 Initial Conditions, MGS Marine Flowline Leak to Open Water

Initial Conditions	
Spill Location:	(b) (7)(F)
Spill Time:	1300 hours on May 23 rd
Source of Spill:	"B" Flowline
Cause of Spill:	Unknown
Quantity of Spill:	1457 bbl
Type of Spilled Oil:	MGS Crude
Wind Speed:	10 knots
Wind Direction:	From SW
Current:	2-4 knots; no ice present
Air Temperature:	52° F
Visibility:	5 miles, clear skies
Surface:	Surface waters of Cook Inlet between Platform A and the Onshore Facility
Spill Trajectory:	Spill trajectory information is provided by the National Oceanic and Atmospheric Administration (NOAA) Scientific Coordinator to the Federal On-Scene Coordinator and Unified Command.
Description:	At 1300 on May 23, the flowline surveillance system sounded an alarm at the onshore facility.

Table 1.5-2 Response Strategy, MGS Marine Flowline Leak to Open Water

Element	Response Strategy	Reference
(i) Stopping Discharge at Source	XTO marine flowline surveillance procedures dictate that the suspect flowline be shut in if the system alarm sounds at the Onshore Facility and the problem cannot be identified in 20 minutes. The XTO Onshore Facility Person in Charge (PIC) will work with the platform PIC. Procedures for shutting in "B" Line at both ends and stopping the discharge include: - Manually close isolation valve on Platform A and Platform C to stop flow into "B" Line. - Manually close isolation valve on "B" Line at Onshore Facility. Since the line will continue to release some oil for a period of time, divers will be dispatched as soon as possible to locate the break in the line and repair it. If the line is broken in two, each end will be individually pulled up onto a work vessel. A flange will be attached to each end of the line and a plug inserted. After the two ends are back on the floor of Cook Inlet, a connecting piece will be fabricated on the vessel and the repair completed by divers. If the line is only cracked, it may be possible to repair it with a clamp after divers remove the cement coating on the line. It may be necessary to remove the cracked section and proceed as above for a complete line break. All reasonable efforts will be made to repair the line as soon as possible.	ODPCP Part 2.1.7
(ii) Preventing or Controlling Fire Hazards	CISPRI personnel aboard the CISPRI primary response vessel, which will be the first response vessel on-scene, will test the air for explosive vapors and report to the command center. Fire hazards will be controlled by restricting access to the spill area and ensuring that potential sources of ignition are eliminated. For a release from an MGS flowline, the potential for explosive vapor concentrations in the early hours of the spill are of primary concern. All skimmers and power packs to be used will be diesel and/or hydraulic-powered, and no smoking will be allowed on the deck on any vessels working on the spill. Exclusion zones will be requested in coordination with the U.S. Coast Guard and the Federal Aviation Administration to keep unauthorized vessels or aircraft away from the spill zone. The OSRV and contracted OSVs all have fire hoses on board to mitigate fire hazards. CISPRI also has a mobile pump with fire monitor capability that can be loaded on any OSV during deployment. Pumps in CISPRI's inventory are also available for pumping seawater from the decks of vessels if required.	ODPCP Part 1.3 CTM Tactics CI-S-1 thru CI-S-6 CI-APP-C

Table 1.5-2 Response Strategy, MGS Marine Flowline Leak to Open Water, continued

Element	Response Strategy	Reference
(iv) Surveillance and Tracking of Oil; Fore-casting Shoreline Contact Points	As soon as possible after the spill, CISPRI tracking buoys or similar object (lights and/or life rings) will be deployed so that the oil can be tracked in bad weather or after dark. The primary means of tracking the oil in good weather will be visual observation from helicopters, fixed-wing aircraft, and vessels. Infrared cameras are available on the CISPRI primary response vessel and on helo or fixed-wing aircraft. The trajectory of the spilled oil will be estimated for the first 12 hours using tide tables, wind speed, and wind direction. However, based on experience in actual spills and local knowledge, it is anticipated that the most likely points of shoreline contact are the East Forelands, Nikiski Bay (just north of the East Foreland), and Boulder Point. In the event operations extend beyond 12 hours, additional modeling support is sought through consultation with the NOAA Scientific Support Coordinator and use of the NOAA trajectory model.	CTM Tactics CI-TS CI-TS-1 CI-TS-2 CI-TS-4
(v) Exclusion Procedures	Deflection booming, exclusion booming, and free-oil containment and recovery are used when oil threatens sensitive environmental areas or areas of public concern. Sensitive areas in Cook Inlet are detailed in <i>Part D – Sensitive Areas</i> and <i>Part G – Geographic Response Strategies (GRS) Maps</i> in the <i>Cook Inlet Subarea Contingency Plan as Most Environmental Sensitive Area (MESA) Maps</i>. Through reference of the NOAA Environmental Sensitivity Index maps for Cook Inlet and consultation with federal and state resource trustees, priority protection sites and areas of immediate concern are established as follows: • CCI-08-01 East Forelands • CCI-22-01 Swanson River (equipment cache staged) • CCI-07-01 Nearshore waters of the Kenai River • CCI-06-01 Nearshore waters of the Kasilof River TF-2 is positioned to maximize free-oil containment and recovery operations in the nearshore waters of selected priority protection sites. TF-2, working with the tide, maintains position up current and up wind to recover oil in the nearshore. CVs assigned to TF-2 use a variety of boom configurations and collection strategies to maximize containment for recovery operations. TF-3 is mobilized and implements diversion and exclusion strategies to assist in shoreline protection at three sites. Logistics places additional resources on standby in the event that other priority protection sites and GRS need to be established. Each site is monitored and the GRS tactics implemented as necessary. If the spill were to occur when shorefast ice was still present in the Inlet, exclusion booming at the mouth of these watercourses may not be feasible. In that case, diversion booming offshore may be used to deflect oil away from the streams.	Table 1.5-3 CTM CI-SA-1 CI-SA-2 CI-NS-2 CI-NS-3 CI-NS-4 CI-NS-6 CI-NS-5 CI-LP-4 To CI-LP-6

Table 1.5-2 Response Strategy, MGS Marine Flowline Leak to Open Water, continued

Element	Response Strategy	Reference
(vi) Spill Containment and Control Actions	TF-1: The OSRV is mobilized to the spill site and initiates spill containment and recovery operations after completing the initial site assessment. TF-1 responds to the spill with its standard open-water equipment and personnel package. This consists mainly of the CISPRI primary response vessel, OSRV <i>Perseverance</i>, with its onboard skimming system, along with two other offshore supply vessels (OSV) and their dedicated skimming systems. Several smaller vessels (CISPRI-owned or contracted) will use appropriate booming tactics to control the spread of the oil and to concentrate it for increased skimming efficiencies. On-water storage will consist of suitable barges, bladders, pollutanks, etc. from CISPRI's inventory. TF-2: Nearshore containment and skimming vessels are activated to supplement open water recovery efforts of TF-1. TF-2, assigned to provide for nearshore containment and recovery of free-oil, also provides for implementation of identified GRS and protection of priority sites. The Operations Section of the Incident Command System (ICS) will determine the number and classification of vessels needed, and request that the CISPRI Vessel Administrator activate those available to respond to the spill area. The Logistics Section of the ICS will ensure that appropriate containment boom, skimmers, on-water storage, and personnel are ready when the vessels arrive. TF-3 provides for onshore diversion of oil for recovery as needed.	Table 1.5-4 Table 1.5-6 CTM Tactics CI-OW-1 CI-NS-1 CI-NS-2 CI-LP thru CI-LP-6 CI-NS-5
(vii) Spill Recovery Procedures	Techniques for mechanical recovery include vessel-mounted portable skimmers. TF-1 consisting of CISPRI's primary response vessels targets the heaviest oil and leading edge of the slick and begins recovery operations. TF-2 is assigned to recover oil that escapes primary open water TF-1 platforms and to implement nearshore GRS tactics. Positioned in the nearshore waters of priority protection sites, TF-2 implements GRS strategies CCI-06-01, CCI-07-01, CCI-08-01 and CCI-22-01. To augment TF-2's assignment, TF-3 is positioned to provide for additional protection of identified resources using onshore diversion and exclusion booming tactics. TF-3 vessels deploy 1500 ft. of boom to recover residual windrows or streamers in the longshore current. Immediately after activation of the XTO Emergency Response Plan, the Environmental Unit, coordinating with agency representatives, prepares and submits applications for the use of dispersants and in situ burning in the event these tactics are needed. The Environmental Unit will coordinate with regulatory agencies to obtain UC approval for in-situ burning and use of dispersants (following completion of the notification procedure). The <i>Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases</i> (commonly referred to as the Unified Plan). <i>Annex F: Oil Dispersant Guidelines for Alaska</i> and <i>In-situ Burning Guidelines for Alaska</i> (Revision 1) dated August 2008 contain detailed instructions on the regulatory approval process and on the equipment and techniques available from CISPRI to implement them.	CTM Tactics CI-OW-1 CI-NS-1 CI-NS-2 CI-NM thru CI-NM-5 CI-LP-4 CI-LP-5 CI-LP-6
(viii) Lightering Procedures	Not applicable	N/A

Table 1.5-2 Response Strategy, MGS Marine Flowline Leak to Open Water, continued

Element	Response Strategy	Reference
(ix) Transfer and Storage of Recovered Oil/Water; Volume Estimating Procedure	CISPRI has over 80,000 barrels of available on-water storage containers, including two Response/Lighting Barges (59,500 bbl and 12,400 bbl), 2 – 3,000 bbl storage bladders, 2 – 50 cm pollutant tanks, 5 – 215 bbl oil/water separators, 4 – 249 bbl mini barges, 4 – 100 bbl micro barges, and other miscellaneous bladders and pillows. Recovered oil in the open-water task force will normally be stored in on-deck 215 bbl oil/water separators until the longer barges arrive on-scene. Recovered oil and water will be transferred into small, portable barges for transport and transfer into the two large barges. Oil recovered by the nearshore task force will be transferred directly into the storage containers assigned. These containers will transport the recovered product for transfer into the larger barges. The large barges can be transported to Drift River or to Kenai Pipeline (KPL). The oil/water mixture will be stored in tanks onshore until XTO makes appropriate arrangements for transport to the XTO facility for processing and recovery. Another alternative is to move the large barges to Offshore Kenai (OSK) Dock where they will be emptied by pump into vacuum trucks or portable storage tanks. The recovered oil will then be transported to the XTO facility for processing and recovery. All oil/water mixtures will be gauged for estimation of the amount of oil recovered. The volume of oil spilled will be determined based on flow rates, shutdown times, tank capacity, and other available data. Consistent with the UC approved Waste Management Plan, the volume of oil recovered will be estimated as oily water and oily waste are taken ashore.	CTM Tactics CI-OW-5 CI-WM-1 CI-WM-2 CI-WM-3 CI-LP-4
(x) Plans, Procedures, and Locations for Temporary Storage and Disposal	Recovered oil/water from the skimming operations will be taken to the XTO Onshore Facility, where the mixture will be placed in the sump tanks. The mixture will be injected into the production system for treatment. The oil will be sold and the treated water will be discharged to Cook Inlet with the normal produced water stream in accordance with the facility NPDES permit. The XTO Liaison Officer will make an emergency request to Environmental Protection Agency (EPA) Region 10 in Seattle to authorize this discharge. EPA has indicated that such authorization will be granted. Oiled debris and sorbents will be disposed of in XTO's incinerator at the Onshore Facility. A lined dumpster will be used to transport oily debris to the Onshore Facility. Transfer stations will be lined in such a manner to prevent secondary spillage during transfer of oiled debris. The incinerator at the Onshore Facility is a high-temperature refractory incinerator rated at 1,000 pounds per hour and may handle 10 to 20 cubic yards of material per day. Following ADEC approval, a concrete staging area lies adjacent to the incinerator, which may be used for temporary storage of recovered solids, oiled debris, and sorbents. Other incinerators will be obtained if needed after the XTO Liaison Officer obtains appropriate permits. Oiled soil will be stored in lined pits on site until a remediation technique is selected; oiled logs will be cut up within a containment boom near the shore for removal.	CTM Tactics CI-WM thru CI-WM-7

Table 1.5-2 Response Strategy, MGS Marine Flowline Leak to Open Water, continued

Element	Response Strategy	Reference
(x) Plans, Procedures, and Locations for Temporary Storage and Disposal	A Waste Management Plan is developed in coordination with ADEC and is approved by the UC. Decontamination of oiled response equipment and vessels are completed prior to the asset being demobilized or taken out-of-service. Recovered oil and water is added into the XTO separation unit for reprocessing.	CTM Tactics CI-WM-1 CI-WM-2 CI-WM-3 App-D
(xi) Wildlife Protection Plan	Wildlife protection plans are coordinated through the environmental unit in consultation with resource trustees and agency representatives. Operations reports any sightings of wildlife in the area. As soon as possible after the spill notification, the CISPRI wildlife response team is notified and placed on stand-by. XTO's Environmental Unit Leader coordinates with the USFWS, NMPS, and ADF&G to obtain necessary permits.	CTM Tactics CI-W to CI-W-6 CI-LP-4 CI-LP-5 CI-LP-6
(xii) Shoreline Cleanup Plan	If necessary, CISPRI shoreline response packages for rivers, for East Forelands, or for other onshore response will be deployed, along with personnel provided by CISPRI. Prior to deployment of shoreline cleanup crews, the XTO Liaison Officer will contact the State Historic Preservation Officer to identify known archaeological and historical sites in the area. CISPRI has a contract with a Historic Properties Specialist to assist member companies regarding cultural resource issues. The Historic Properties Specialist also has access to the listings of known cultural resource sites. Local Native corporations will be contacted as appropriate to obtain access permits.	CTM CI-SL-1 CI-SA-3 CI-NS-5 CI-LP-6 Cook Inlet Subarea Contingency Plan Resources Section

Table 1.5-3 Major Equipment and Staffing for Recovery Task Forces, MGS Marine Flowline Leak to Open Water

Equipment	No. of Staff Per Shift	CTM Tactic / Response Function
TF-1 - Open Water		
OSRV with 13-30 Disc Skimmer	4	CI-OW-1, CI-OW-6 Containment / Recovery
OSV with 56-30 Disc Skimmer	3	CI-OW-1, CI-OW-6 Containment / Recovery
Response/Lightering Barge	3	On-water Storage and Support Platform
4 – Class 3 / 4 Vessels (Boom Towing)	8	CI-NS-1, CI-NS-2
3,000' Containment Boom (Ocean)	0	Containment
Current Buster	0 ²	Collection / Containment
TF-2 – Nearshore		
Utility Vessel with 13-30 Disc Skimmer	4	CI-NS-1 Maximize nearshore recovery
Utility Vessel with 2 – Front Collector Brush Skimmers	3	CI-NS-5 Exclusion / Diversion
4 CV – Class 3 / 4 Vessels (Boom Towing) ¹	0	CI-NS-2
2 CV – Class 3 / 4 Vessels (Towing On-Water Storage) ¹	0	CI-NS-1
1 – 100 Bbl Barge	0	Storage
2 – 50 m ³ Pollutants	0	Storage
2 – 3000 bbl Bladders	0	Storage
Containment Boom – 2,250 ft	0	Containment / Exclusion / Diversion
TF-3 – Onshore		
6 – Class 6 Vessels (Skiffs)	6	Onshore / Support
3 – Skimmers (Calm Water)	3	Onshore / Recovery
1500ft Containment Boom with Anchors	0	Onshore / CI-NS-5

¹ Reference Tactic CI-LP-5 for vessel crew assumptions² Up to two may be used with disc skimmers for enhanced recovery capacity (Tactic CI-OW-6)

Table 1.5-4 Mass Balance Calculations, MGS Marine Flowline Leak to Open Water

A Spill Recovery Tactic	B Number of Systems	C Derated Oil Recovery Rate (boph)	D Mobilization and Transit Time to Site (Hours)	E Operating Time (Hours per 24- hour Shift)	F Recovery Capacity (bopd) (B x C x E)
TF 1 Open Water					
OSRV	1	32	2	18	576
OSV	1	142	6	16	2,272
TF-2 Nearshore					
Utility Vessel	1	32	3	16	512
Utility Vessel w / 249 bbl Barge	1	52	3	16	832
TF-3 Onshore/GRS					
Skimmers (Rope Mops)	3	7	8	16	336

Table 1.5-5 Oil to Be Recovered, MGS Marine Flowline Leak to Open Water

G Initial Spill Volume (bbl)	H Evaporative Loss (bbl) 20% ¹	I Emulsification Factor (bbl) (1.54)	J Oil + Emulsion to Be Recovered (bbl)	K Number of Days to Recover Oil (J / F)
1,457	292	2,244	2,244	1

¹For the purposes of planning, evaporative loss is disregarded.

Table 1.5-6 MGS Marine Flowline Leak to Open Water, Oil Recovery Timeline

Hour	1-2	3	4	5	6	7	8	9 – 10	11 – 12	13 – 16	17 - 24
TF-1 Offshore											
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators		32	32	32	32	32	32	64	64	128	128
OSV, 56-30 Disc Skimmer (142 boph), 2 – 215 bbl o/w separators Response Lightering Barge						142	142	284	284	568	1,136
TF-2 Nearshore											
Utility Vessel, 13-30 Disc Skimmer (32 boph), 1 – Mini Barge			32	32	32	32	32	64	64	64	256
Utility Vessel, 2 – Front-Collector Brush Skimmers (52 boph) 1 – Mini Barge			52	52	52	52	52	104	104	104	416
TF-3 Onshore											
Skimmers, Rope Mops (3 x 7 boph)								42	42	84	168
Period Recovered Fluids		32	116	116	116	258	258	558	558	948	2,104
Cumulative Total		32	148	264	380	638	896	1,454	2,012	2,960	5,064

Total Oil (bbl) in First 24 Hours: 5,064

Disc Skimmer packages may be paired with appropriate buster boom (Tactics CI-OW-6 and CI-NS-2) for increased recovery capacity.

Recovery capacity dependent upon skimmer efficiency and interim storage capacity (CI-LP-4).

Offload rate DOP 250 = 651 boph capacity (CI-LP-4).

CVs cycle mini barges between TF-2 recovery platforms for continuous recovery operations.

TF-2 Utility Vessel operates intermittently targeting streamers and windrows that escape TF-1.

CISPRI's response capability greatly exceeds the required recovery rate, as shown in Tables 1.6-3. This scenario shows a very aggressive response where skimmers deployed exceed the RPS. Response will continue, as directed by Unified Command, until source control is secured and recovery operations are complete.

1.5.6 Onshore Surge Tank Scenario

Table 1.5-7 Onshore Surge Tank Failure Scenario

Element	Response Strategy	Reference
Description	At approximately 3:00 pm, November 16, a (b) (7)(F) at XTO's MGS Facility experienced a catastrophic failure, resulting in the discharge of the entire volume of the tank approximately (b) (7)(F) bbl of oil into a lined berm of approximately 11,000 square feet with a capacity of (b) (7)(F). The release created a "wave" that "rode over" the containment wall resulting in the release of 1,350 bbl onto the gravel roadway and ditch encircling the berm. The remaining (b) (7)(F) within the primary containment area were not damaged. One is always empty and the second contains an average of 500 – 750 bbl of oil. The released product will penetrate the snow cover down to the berm liner (or soil) and will travel to low lying areas of the containment. It is expected that there will be substantial amounts of contaminated snow and ice. This amount will be included in the total recovered fluid volumes.	Section 5.1 of this Plan Figure 1.5-1
(i) Weather/Site Conditions	Temperature is 0 degrees Fahrenheit (° F). Snow cover of depths of 2 to 3 feet are found within both containment areas. Skies are partly cloudy with moderate winds are from the north at 25 knots. Ceiling is 500 feet and visibility is 0.5 mile. Crude oil temperature is approximately 60° F at the time of discharge.	
(ii) Preventing or Controlling Fire Hazards	Fire hazards will be controlled by restricting access to the spill area and ensuring that potential sources of ignition are eliminated. XTO relies on the fire extinguishers throughout the facility to suppress any insipient fires that could occur. CISPR personnel will arrive and conduct site characterization, establish safety zones and appropriate PPE to enter the area. For major fire control, personnel will call 911. The Nikiski Fire Department will be dispatched as a precaution and to provide fire fighting capability.	CTM Tactics CI-S thru CI-S-6 CTM App – C
(iv) Surveillance and Tracking of Oil; Shoreline Contact Points	The oil will penetrate the snow cover to the liner and will travel to low lying areas of the containment. It is expected there will be substantial amounts of contaminated snow and ice. Delineation of the area impacted will determine the perimeter of the spilled oil. The delineation process consists of probing the snow with shovels or poles to determine the extent of the product travel under the snow cover.	CTM Tactic CI-TS-3
(v) Exclusion Procedures	Oil will flow to and be confined to low points in the primary berms, primarily at the sump area. The oil that escaped the berm is contained by the ditch.	
(vi) Spill Containment and Control Actions	The oil is contained in the primary and secondary berms. It will remain there until recovered.	CTM Tactic CI-IL-1

(vii) Spill Recovery Procedures	Primary Berm Recovery The primary containment area has an exposed liner to prevent petroleum products from coming into contact with the underlying soils. To protect the integrity of this liner, heavy equipment, metal hand tools, or other operations which may damage the liner will not be allowed in the primary containment area. To prevent any environmental impact and avoid damage to the liner, passive collection techniques will be utilized. One possible recovery method uses heated water from the processed water separation system currently discharged under a NPDES permit (75 boph). This water is discharged at temperatures of approximately 120° F and can be re-directed to the primary containment area by hose or tank truck. The temperature will be adequate to melt contaminated snow and ice in the lined bermed area. The warm water can be applied by using several different techniques; two primary options are: • Flushing from up gradient to concentrate the oil/water mixture; or • Flushing in the area of the collection sump working from dirty to clean. Other potential sources of heated water used to melt contaminated snow and ice are hot water pressure washers, steam wands, etc. Manual techniques can also be used to recover final residual product on an exposed liner. These techniques are best applied in times of little or no snow cover. Warm water wand, brooms, plastic shovels, squeegees, etc. can be used to move the product into the collection sumps for processing by the XTO facilities. Once the snow/ice is melted, and the oily water mixture is moved to the low areas, it will be pumped into the empty storage tank (4,916 bbl) in the primary containment berm. This can be accomplished by using pumps or a vacuum truck. Once the oil/water mixture is in the tank, it can be injected into the existing facility's oil/water separator system for processing/recovery as the facility's operations allow. Secondary Berm Recovery: The XTO facility has been designed to reduce any environmental impact from discharges of this type. In the unlikely event of a failure allowing contamination to occur in the unlined containment, XTO proposes removal of contaminated snow in unlined areas by using more aggressive techniques, such as heavy equipment or manual material removal. The use of heavy equipment requires that the vehicles work from clean areas into the dirty, removing as much clean snow from the areas as possible and then removing the contaminated material (soil, snow, oil). The contaminated material will be placed in open-top storage tanks for melting, separation and recovery. Some tanks have heating coils integral to the tank. Steam generators may be hired to aid in the melting process of recovered material in those tanks that do not. Both types of tanks are readily available in the local area. Another alternative is to move the tanks into indoor storage for melting of the recovered materials.	Table 1.5-8 Table 1.5-9 Figure 1.5-1 STAR Manual Tactic ORs, LST, and POL CTM Tactics CI-WM thru CI-WM-7 Figure 1.5-1 CTM Tactic CI-IL-1 CI-IL-9 Tables 1.5-8 thru 1.5-11
---------------------------------	---	---

(viii) Lightering Procedures	The entire volume of the tank is released. No lightering is needed.	N/A
(ix) Transfer and Storage of Recovered Oil/Water; Volume Estimating Procedures	Oil and oil/snow mixture will be transferred directly to temporary storage. XTO rigs tanks with heating coils so that oily snow can be melted for reprocessing. Fluids are processed through XTO's onshore facility after melting. Primary Berm Product Transfer The primary containment area is designed with collection sumps in two low areas of the berm. The oil/water mix will continually flow into these low areas and will be removed by use of vacuum truck, "super sucker" or portable pumps, etc. The oil/water mix will then be transferred into the empty storage tank in the primary containment berm for eventual re-injection back into the XTO facility for processing or discharge. Secondary Berm Product Transfer: The contaminated mixture will be transferred into large (30 yd³) open top tanks for melting into liquids and then pumped into the empty storage tank in the primary containment berm for eventual transfer into XTO's oil handling system. The gravel recovered with the contaminated snow and ice must be separated from the mixture before the melted liquids can be pumped into the empty storage tank in the primary containment berm.	Table 1.5-8 Table 1.5-9 Table 1.5-10 Table 1.5-11 STAR Manual Tactics ORs, LST, and POL CTM CI-WM CI-WM-1 CI-WM-4 CI-IL-1
(x) Plans, Procedures and Locations for Temporary Storage and Disposal	Temporary storage for the contaminated snow/oil will consist of 30 yd³ tanks. Once melted and separated from the gravel and soil, all liquids will be pumped into the empty storage tank in the primary containment berm, either directly by pumps or indirectly via a vacuum truck. Oil recovered from the primary berm will be transferred directly into an empty tank within the primary berm. The incinerator at the Onshore Facility is a high-temperature refractory incinerator rated at 1,000 pounds per hour and may handle 10 to 20 cubic yards of material per day. A concrete staging area lies adjacent to the incinerator, which may be used for temporary storage of recovered solids, oiled debris, and sorbents.	CTM CI-WM CI-WM-1 CI-WM-4 CI-WM-7
(xi) Wildlife Protection Plan	No wildlife impacts are anticipated. The spill occurs during winter months on land.	N/A
(xii) Shoreline Cleanup Plan	Not applicable in this scenario.	N/A

Table 1.5-8 Mass Balance Calculations

Area	Area of Scattered Oil		Volume Of Oil	Average Depth	Volume of Contaminated Snow*	Bbl of Melted Snow	Bbl Total Fluids
	Initial Area	Area Affected After Oil Spreads					
Primary Berm	8,500 ft ² (30%)	14,175 ft ² (50%)	1,100 bbl	20"	1,575 yd ³	631	1,731
Secondary Berm	750 ft ² 50' X 15'	1,500 ft ² 100' X 15'	250 bbl	3"	167 yd ³	67	317
Note – Water volume for snowmelt is based on 12" of snow = 1" of fluid. Assume that once the oil spills and spreads, the entire area in the berm would be considered contaminated and is treated as contaminated material.							
* 3 ft Snow Depth Covering 14,175 ft ² Prior to any melting, the volume of snow (in yd ³): Primary = 14,175 ft ² x 3 ft/27 ft ³ /yd ³ = 1575 yd ³ Secondary = 1500 ft ² x 3 ft/27 ft ³ /yd ³ = 167 yd ³							
Snow melts and produces 1 inch water per 1 foot of snow. bbl of Melted Snow: Primary Berm $\frac{14,175 \text{ ft}^2 \times 3 \text{ ft} \times \frac{1 \text{ in. water}}{1 \text{ ft. snow}} \times \frac{7.48 \text{ gal.}}{\text{ft}^3}}{\frac{12 \text{ inches}}{\text{foot}} \times \frac{42 \text{ gallons}}{\text{bbl}}} = 631 \text{ bbls}$ bbl of Melted Snow: Secondary Berm $\frac{1,500 \text{ ft}^2 \times 3 \text{ ft} \times \frac{1 \text{ in. water}}{1 \text{ ft. snow}} \times \frac{7.48 \text{ gal.}}{\text{ft}^3}}{\frac{12 \text{ inches}}{\text{foot}} \times \frac{42 \text{ gallons}}{\text{bbl}}} = 67 \text{ bbls}$ Total Fluids (oil and melted snow): 1100 + 631 = 1731 bbl.							

Table 1.5-9 Recovery and Handling Capability

A Spill Recovery Tactic	B No. of Systems	C Recovery System	D Oil/Oiled Snow Recovery Rate (yd ³ /hr or boph)	E Mobilization and Transit Time to Site (hrs)	F Operating Time (hrs/day)	G Handling Capacity (yd ³ /day) B X D X F	H Handling Capacity (bopd)
Heavy Equipment	2	Loader	50 yd ³ /hr	1.5	6*	300 yd ³	0
Pumping	2	CISPRI Pumps	695 boph	1.5	7	N/A	4,880
Pumping	2	Vacuum Truck	75 boph	3.5	5	N/A	262.5
Pumping	1	Super Sucker	100 boph	3.5	5	N/A	500
						Total	5,642

* Snow removal efforts continue until all contaminated snow transfer from the containment area is complete. This effort is coordinated with passive collection techniques as described in Table 1.5-7.

Table 1.5-10 Major Equipment and Staffing for Recovery Task Forces

Equipment	No. of Staff Per Shift	Task Force
Loader (1 yd ³)	1.5*	Oil Recovery
Loader (4 yd ³)	1.5*	Oil Recovery
Manual Hand Tools	3	Oil Recovery
Vacuum Truck (2 each)	3	Oil Recovery
CISPRI 3" Portable Pump (468 boph)	1	Oil Recovery
CISPRI 2" Portable Pump (227 boph)	1	Oil Recovery
Open Top Storage Tanks	1	Oil Recovery
Steam/Heat Generator	2	Oil Recovery
Super Sucker Truck	1	Oil Recovery
Total	15	

0.5 = Spotter half-time with each loader

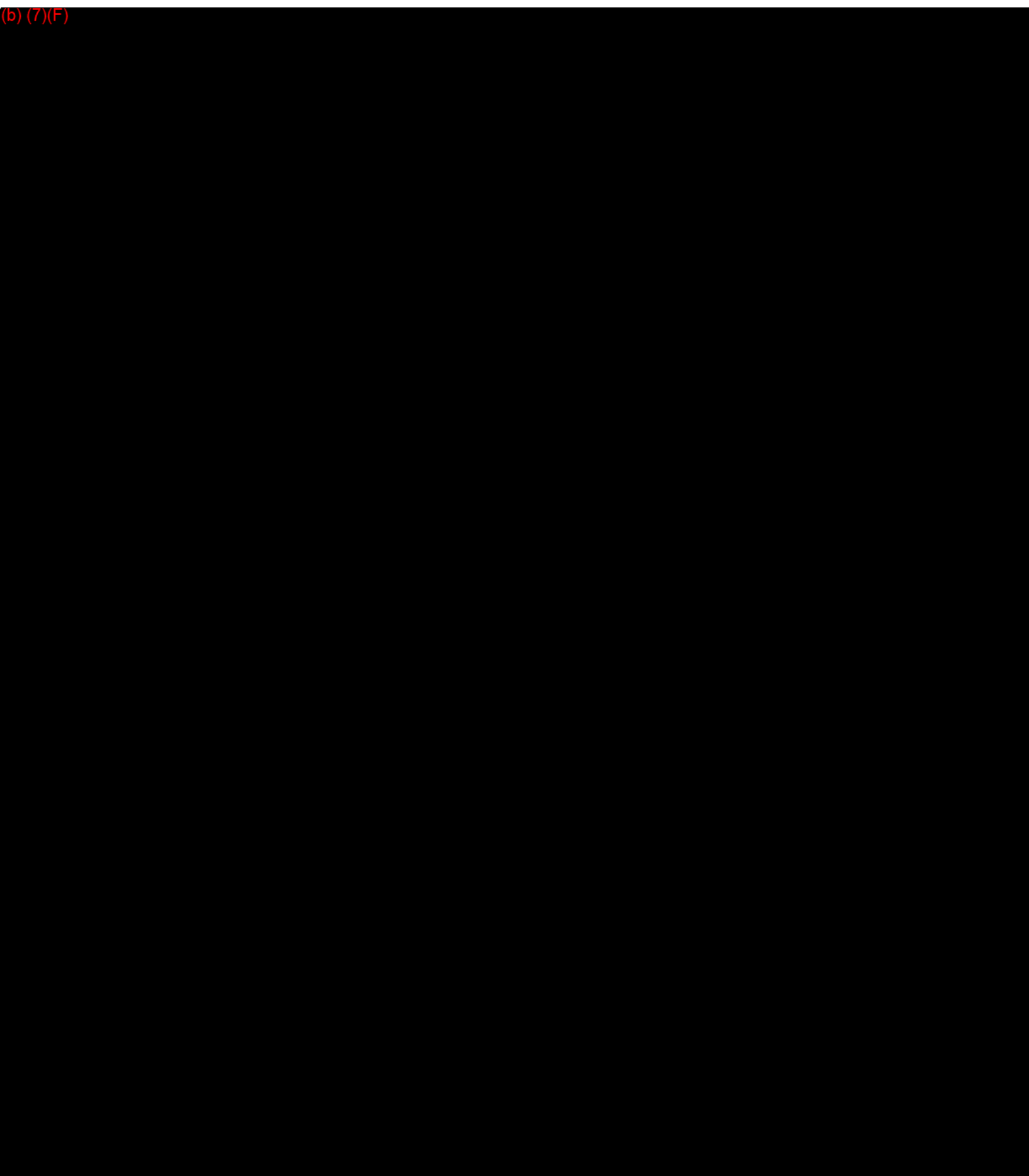
Table 1.5-11 Onshore Surge Tank Failure Scenario, Timeline Depicting Recovery Capability*

Hour	1-2	3	4	5	6	7	8	9
Loaders	(25 yd ³)	(50 yd ³)	(50 yd ³)	(50 yd ³)	(50 yd ³)	(50 yd ³)	(25 yd ³)	
2x CISPRI Pumps (695 boph)	348	695	695	695	695	695	695	348
2x Vacuum Trucks (75 boph)			37	75	75	75	75	37
Super Sucker (100 boph)			50	100	100	100	100	50
Period Recovered Fluids	348	695	782	870	870	870	870	435
Cumulative Total	348	1043	1825	2695	3565	4435	5305	5740

* Reference Table 1.5-8 and Table 1.5-9 for Oiled Snow Recovery and Table 1.5-7 for discussion of recovery strategies and tactics.

Total bbl in First 24 Hours: 5,740

(b) (7)(F)



1.5.7 Platform Girder Tank Release Scenario

Table 1.5-12 Initial Conditions, Platform Girder Tank Release

Spill Location	Platform C, Cook Inlet
Spill Time:	0600 a.m., June 6
Source of Spill:	Girder Tank Release
Cause of Spill:	Unknown
(b) (7)(F)	
Type of Spilled Oil:	Diesel
Wind Speed:	0-5 knots
Wind Direction:	From SW
Current:	3 knots; no ice present
Air Temperature:	50° F
Visibility:	5 miles, clear skies
Surface:	Seas are calm
Spill Trajectory:	Spill trajectory information is provided by the National Oceanic and Atmospheric Administration (NOAA) Scientific Coordinator to the Federal On-Scene Coordinator and Unified Command.
Description:	It is estimated the spilled product will go approximately 4 miles north with the flooding tide until it ebbs, then begin following the ebbing tide down the central part of Cook Inlet. Optimum skimming time is during slack tide, approximately, when the current will be slowest. Shoreline impact is not likely because diesel is non-persistent. No wildlife impacts are anticipated. Chances are great that approximately 25% of diesel will have evaporated by hour 8, so recovery numbers reflect the potential diesel recovered.

Winter Considerations

Due to the location of the XTO platforms, it is very likely that the same equipment will be used during winter conditions. If a significant amount of ice is present in the area, an additional OSV may deploy skimmers, along with the OSRV, in place of the Utility Vessels. Recovery time under these conditions may be a little longer. Lightering will be to tanks on deck and transported either to platform or the XTO onshore facility for disposal.

Table 1.5-13 Response Plan, Platform Girder Tank Release

Element	Response Strategy	Reference
(i) Stopping Discharge at Source	The source of such a spill would be one of the platform girders. Once the spill is detected, the affected girder will be isolated and venting will be covered. Product remaining in the girder can be transferred into the production system. The leaking tank can be filled with water to float any remaining diesel while the leak is being repaired. Agencies are notified. CISPRI is activated. Unocal and Tesoro IRTs are mobilized to CISPRI. The IMT is activated for response operations and logistics.	Section 2.1.10 Sections 1.1 and 1.2 CTM Tactics CI-LP-1 CI-LP-3
(ii) Preventing or Controlling Fire Hazards	Fire hazards will be controlled by restricting access to the spill area and ensuring that potential sources of ignition are eliminated. For a release to the water from a girder, the concern centers on the potential for explosive vapor concentrations in the early hours of the spill. CISPRI personnel onboard the OSRV, the first response vessel on-scene, will test the air for explosive vapors and report back to the command center. Site characterization is completed. All skimmers and power packs used will be diesel-powered, and no smoking will be allowed on the deck on any vessels working on the spill. An exclusion zone is established in coordination with the U.S. Coast Guard and the Federal Aviation Administration to keep unauthorized vessels or aircraft away from the spill zone. Platform rooms where hydrocarbons could be released have stationary gas, hydrogen sulfide and fire detectors. Portable gas detectors are also available. The platforms have automatic equipment shutdown activated by gas detection and by failure (high/low level and high/low pressure). This system shuts down the entire platform. In addition, rooms with potential ignition sources are maintained at a positive pressure relative to rooms containing hydrocarbons. A Utility Vessel or a Cook Inlet Capable (CIC) boat is dispatched with CISPRI's Safety Officer on board and may also serve as personnel transport.	Section 1.3 Figure 1.8-3 CTM Tactics CI-S to CI-S-6
(iv) Surveillance and Tracking of Oil; Shoreline Contact Points	As soon as possible after the spill, CISPRI tracking buoys are deployed so that the oil can be tracked if the weather deteriorates. The primary means of tracking the oil in good weather will be visual observation from helicopters, fixed-wing aircraft, and vessels. The trajectory of the spilled oil is estimated for the first 12 hours using tide tables, wind speed, and wind direction. Based on experience in actual spills and local knowledge, it is anticipated that the most likely points of shoreline contact are the east side of Kalgin Island and Nikiski Bay just north of the East Foreland.	CTM Tactics CI-TS to CI-TS-4
(v) Exclusion Procedures	Should hydrocarbons threaten sensitive environmental areas or areas of public concern, deflection or exclusion booming will be used. The NOAA Environmental Sensitivity Index maps for Cook Inlet and other documents available at the CISPRI response center will be used to identify the areas of immediate concern, in consultation with federal and state officials on-scene.	CTM Tactics CI-SA-1 to CI-SA-3

Table 1.5-13 Response Plan, Platform Girder Tank Release, continued.

Element	Response Strategy	Reference
(vi) Exclusion Procedures (Cont'd)	Following are the sensitive areas which could potentially be impacted by a spill from a XTO platform girder: • CCI-08-01 East Forelands • CCI-22-01 Swanson River (equipment cache staged) • CCI-07-01 Nearshore waters of the Kenai River • CCI-06-02 Nearshore waters of the Kasilof River CISPRI has response packages that can be used for these locations. The mouth of the Swanson River north of Boulder Point will be monitored and will be boomed if it appears that hydrocarbons threaten it. CISPRI maintains an equipment cache at Swanson River – reference CTM Tactic CI-LP-4. (If the spill were to occur when shorefast ice was present in the inlet, exclusion booming at the mouth of these watercourses may not be feasible. In that case, diversion booming offshore will be used to deflect oil away from the streams.)	GRS CCI-20-01 CCI-06-01 CCI-07-01
(vii) Spill Containment and Control Actions	The OSRV with its onboard skimming system is mobilized and responds to the spill with open-water equipment and personnel. After completion of the initial site characterization, the OSRV is on-scene, deploys boom to limit the spread of oil, and begins recovery operations. (The vessel and its onboard system are used year-round, but the presence of ice might prevent the deployment of the containment boom. Reference CTM Tactic CI-OW-2.) Additional containment and recovery assets are mobilized. Two OSVs are activated. One will hook up to the Response/Lighting Barge and arrive on-scene about Hour 4. Hour 5: A Utility Vessel with a mini barge is dispatched from OSK Dock arrives on-scene. A CIC boat will tow boom in a J configuration with the Utility Vessel. A Utility Vessel, dispatched from OSK Dock with a mini barge in tow, arrives on scene and deploys outriggers for containment. Another Utility Vessel is dispatched with mini in tow for lighting. MWRT personnel will be alerted and be at the Command Center by Hour 4. Contract SNRTs are placed on standby.	CTM Tactic CI-OW-1 CI-OW-6 CI-NS-1 CI-NS-2
(viii) Spill Recovery Procedures	Techniques for mechanical recovery which could be implemented include vessel-mounted portable skimmers. The primary skimming system would likely be the skimmer onboard the CISPRI primary response vessel. The OSRV is on-scene within one hour with three CISPRI personnel. Site characterization is completed. At about Hour 3, the OSV arrives and deploys their skimmer within the boom and skimming begins. Recovered fuel is stored onboard the OSRV in the 215 bbl o/w separator and 2,500 bbl on-board storage. The OSV will begin recovery with 56-30 Disc Skimmer into on-board 215 bbl oil-water separator tanks, and transfer recovered fuel to the Response/Lighting Barge. The two Utility Vessels with mini barges, boom and skimmers (13-30 Disc Skimmer, and two Front Collector Brush Skimmers) will recover product and rotate mini barges to transfer recovered fuel to the for interim storage.	CTM Tactic CI-OW-1 CI-NS-1 Table 1.5-14
(ix) Lightering Procedures	N/A	N/A

Table 1.5-13 Response Plan, Platform Girder Tank Release, continued.

Element	Response Strategy	Reference
(x) Transfer and Storage of Recovered Oil/Water; Volume Estimating Procedure	Upon arrival of the OSVs with the Response/Lightering Barge, the OSRV will transfer recovered fuel into the Response/Lightering Barge. The Response/Lightering Barge will remain on scene to serve as interim storage of recovered fuel and to allow continuous recovery operations. Oil recovered from offshore skimming operations is transferred to the barge for offload at the OSK Dock. Vacuum trucks or tank trucks will then be used to transport the mixture to the XTO Onshore Facility for processing. XTO personnel will estimate the volume spilled based on the amount of diesel that was in the tank before the spill and the amount remaining. The volume of oil spilled will be determined based on flow rates, shutdown times, tank capacity, and other available data. The recovered oil volume would be estimated as fluids and oily waste are transferred to shore.	CTM Tactics CI-OW-5 CI-WM-1 to CI-WM-3 CTM App-D
(xi) Plans, Procedures, and Locations for Temporary Storage and Disposal	The Environmental Unit Lead, in coordination with agency representatives, will obtain the necessary UC approval of the waste management plan, which will address provisions for temporary storage and ultimate disposal. Two 300-bbl tiger tanks will be mobilized to the OSK Dock for acceptance of recovered fluids from the skimming operations. The oil/water content will be gauged before the tiger tanks are taken to the XTO Onshore Facility. Recovered oil/water from the skimming operations will be transported from the dock in vacuum trucks to the XTO Onshore Facility, where the mixture will be placed in the sump tank. The mixture will then be injected into the production system for treatment, with the oil going to sales and the treated water discharged to Cook Inlet with the normal produced water stream, regulated by NPDES permit. (The XTO Liaison Officer will make an emergency request to EPA Region 10 in Seattle to authorize this discharge. EPA has told XTO that such authorization will be granted.) Consistent with the UC approved Waste Management Plan, oiled debris and sorbents would be disposed of in XTO's incinerator at the Onshore Facility. A lined dumpster are used to transport oily debris to the Onshore Facility. Transfer stations are lined in such a manner to prevent secondary spillage during transfer of oiled debris. The incinerator is a high-temperature refractory incinerator rated at 1,000 pounds per hour and could handle 10 to 20 cubic yards of material per day. Subject to UC and ADEC approval, a concrete staging area adjacent to the incinerator may be used for temporary storage. During the winter, tanks will be rigged with heating coils so that oily snow can be melted for reprocessing.	CI-LP-6 STAR Manual Tactics MST CTM Tactics CI-WM-1 CI-WM-2 CI-WM-4

Table 1.5-13 Response Plan, Platform Girder Tank Release, continued.

Element	Response Strategy	Reference
(xii) Wildlife Protection Plan	XTO's Environmental Unit Lead coordinates with trustee agencies to establish priority protection sites and a Wildlife Protection Plan. Members of the Marine Wildlife Rescue Team are activated through CISPRI and mobilized to Nikiski. Permits are prepared and submitted for wildlife hazing. The wildlife resources at risk depend on the season. Eagles, seabirds, beluga whales, sea otters, sea lions, and harbor seals are present all year. Waterfowl and shorebirds are most abundant during the spring and fall migrations. Salmon fry and eggs are present in streams all year, while adults are present in nearshore waters from spring through fall. Razor clam beaches are sensitive all year, as are marine mammal haulouts, seabird rookeries, and any concentration of wildlife.	CTM Tactics CI-W-1 to CI-W-5 CI-LP-3 CI-LP-4 CI-LP-6
(xiii) Shoreline Cleanup Plan	If necessary, CISPRI shoreline response packages for rivers, for Kalgin Island, or for other onshore response will be deployed, along with personnel provided by CISPRI. Prior to deployment of shoreline cleanup crews, the XTO Environmental Unit Lead will contact the State Historic Preservation Officer to identify known archaeological and historical sites in the area. Local Native Corporations will be contacted as appropriate to obtain access permits.	CTM Tactics CI-SA-1 to CI-SA-3 CI-SL-1 to CI-SL-8 CI-LP-6 CI-LP-3 Cook Inlet Subarea Contingency Plan Resources Section

Table 1.5-14 Platform Girder Tank Release, Oil Recovery Timeline

Hour	1-2	3	4	5	6	7	8	9 – 10	11 – 12	13 – 16	17 - 24
TF-1 Offshore											
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators		32	32	32	32	32	32	64	64	128	256
OSV, 56-30 Disc Skimmer (142 boph), 2 – 215 bbl o/w separators Response Lightering Barge				142	142	142	142	142	284	426	994
Utility Vessel, 13-30 Disc Skimmer (32 boph), 1 – Mini Barge				32	32	32	32	64	57	64	185
Utility Vessel, 2 – Front-Collector Brush Skimmers (52 boph) 1 – Mini Barge					52	52	52	93	52	197	301
Period Recovered Fluids		32	32	206	258	258	258	363	457	815	2,136
Cumulative Total		32	64	270	528	786	1,044	1,407	1,864	2,679	4,815

Total Oil (bbl) in First 24 Hours: 4,815

Recovery capacity dependent upon skimmer efficiency and interim storage capacity (CI-LP-4).

Disc skimmer packages may be paired with appropriate buster boom for enhanced recovery capacity (Tactics CI-OW-6, CI-NS-2)

Offload rate DOP 250 = 651 boph capacity (CI-LP-4).

CISPRI's response capability greatly exceeds the required recovery rate, as shown in Tables 1.6-3. This scenario shows a very aggressive response where skimmers deployed exceed the RPS. Response will continue, as directed by Unified Command, until source control is secured and recovery operations are complete.

1.6 Platform C Well Blowout

1.6.1 Summer Conditions

Table 1.6-1 Initial Conditions – Platform C Well Blowout – Summer Conditions

Initial Conditions	
Spill Location:	Middle Ground Shoal, Platform C
Spill Time:	Summer, July, 08:00
Cause of Spill:	The XTO Platform C oil production platform experiences an uncontrolled well release and is unable to control the flow from the platform.
Quantity of Spill:	(b) (7)(F) .
Type of Spilled Oil:	Cook Inlet crude oil; 34.5° API
Wind Speed:	10 kts SW
Air Temperature:	55° F
Seas:	Calm
Visibility:	10 miles
Surface:	Cook Inlet
Spill Trajectory:	Once the oil breaches containment on the platform, it flows off the platform, and impacts the water beneath the platform. The slick begins to move north on the flood tide. With a nominal wind, the oil may be sprayed as much as 50 yards from the platform in the direction in which the wind is blowing. Although the region is complex due to strong tidal currents and three dominant rip zones, the Gnome model in diagnostic mode is used for trajectory modeling in Cook Inlet. The rip zones occur along marine water convergent or divergent zones. Oil will move into and travel along these rips at speeds of up to 6 knots. The trajectory is modeled using historical wind data directions of SSW (55% of the time), SW (22 %), and then S (22%) at 8.3kts. (Figure 1.6-1) As the oil approaches Middle Ground Shoal, it is deflected to the Northeast by the bathymetry and will be affected principally by the predicted tidal current. The wind vector for oil slicks is assumed to be approximately 3% of the wind speed, so typical summer winds of less than 20 knots will be overpowered by the tidal current. As the tide changes over a period of days, any oil remaining on the water will be affected by the rips zones and generally move in the direction of the tidal currents (North to South below the forelands, southwest to northeast above the Forelands). Tracking buoy information and field observations are used to update and validate the trajectory analysis.
Tidal Stage:	Flood

Table 1.6-2 Response Strategy, Platform C Well Blowout – Summer Conditions

Element	Response Strategy	Reference
Description:	The XTO Platform C oil production platform experiences an uncontrolled well release and is unable to control the flow from the platform. Based upon the known pressures of this well flowing unassisted, XTO expects 70 bbl of oil to be initially unloaded from the tubing, tapering to less than 5 bbl per day once gas lift is shut down. For the purposes of this scenario a worst-case flow rate of 70 bbl of oil per day for a 30-day period was used for a maximum release of 2,100 bbl of oil to meet BSEE's requirements (which exceed ADEC's 15-day requirement). This scenario is very conservative. This wellhead is covered. Oil from this low-pressure, low-flowrate well would be released into this covered housing where it would collect in a sump pump. The oil would then be transferred by pipeline to shore. XTO does not expect the oil to be blown into the air from the release point due to the very low reservoir pressure. For the purposes of this scenario, it is assumed that this volume impacts Cook Inlet waters.	
(i) Stopping Discharge at Source	Production wells are equipped with SSVs and SCSSSVs in accordance with the regulations of the AOGCC in 20 AAC 25.265. The flowlines from the platforms to shore have both manual and automatic pipeline isolation valves. The XTO drilling department will implement plans to control the well as described below. Production wells are controlled with SSV's and SCSSSVs as described above. If well control is lost during drilling operations, resulting in an uncontrolled flow of fluids at the surface, detailed planning will begin to regain control will include three primary considerations: • Additional surface control measures; • Well capping; and • Drilling a relief well.	Section 1.1 Section 1.5.4 Section 2.1.10 Section 2.4.2
(ii) Preventing or Controlling Fire Hazards	Fire hazards will be controlled by restricting access to the spill area and ensuring that potential sources of ignition are eliminated. For a release to the water from a girder, the concern centers on the potential for explosive vapor concentrations in the early hours of the spill. CISPRI personnel onboard the CISPRI primary response vessel, which will be the first response vessel on-scene, will test the air for explosive vapors and report back to the command center. All skimmers and power packs to be used will be diesel-powered, and no smoking will be allowed on the deck on any vessels working on the spill. An exclusion zone is established in coordination with the U.S. Coast Guard and the Federal Aviation Administration to keep unauthorized vessels or aircraft away from the spill zone. Platform rooms where hydrocarbons could be released have stationary gas, hydrogen sulfide and fire detectors. Portable gas detectors are also available. The platforms have automatic equipment shutdown activated by gas detection and by failure (high/low level and high/low pressure). This system shuts down the entire platform. In addition, rooms with potential ignition sources are maintained at a positive pressure relative to rooms containing hydrocarbons.	Part 1.3 CTM Tactics CI-S to CI-S-6 Figure 1.8-2 Figure 1.8-3

Table 1.6-2 Response Strategy, Platform C Well Blowout – Summer Conditions, continued

Element	Response Strategy	Reference
(iv) Surveillance and Tracking of Oil; Shoreline Contact Points	Upon notification, CISPRI mobilizes resources within an hour to perform aerial overflights providing visual and infrared camera information on the slick. This information is conveyed to the Command Center and is used to direct on-water operations into the heaviest oil for recovery. A trajectory is run using the Gnome model. The model results indicated the oil moved into prominent Cook Inlet rip zones and travels along the zones at current speeds of up to 6 knots. Oil weathering results, minimizing the spreading of oil and lessening possible shoreline contact. A 30-day trajectory model, run without accounting for oil removal, shows that isolated shoreline contact may occur between the West and North Forelands; between East Forelands and 10-15 nautical miles (nm) south of East Forelands. Oil may also contact isolated locations on the west side of Cook Inlet and east shoreline of Kalgin Island. In all, the 30-day trajectory model run shows that about 14 percent of the total released may contact shorelines, however this number accounts for no removal activity for the entire 30 days. Specific Geographic Response Strategies are implemented if spill trajectories, supported by field observations, indicate probable impact.	CTM CI-TS to CI-TS- 4 CI-LP-3 Figure 1.6-1
(v) Exclusion Procedures	Protection of sensitive areas shall be one of the highest priorities of a spill response. CISPRI's inventory includes approx. 13,500 ft of river/canal boom that could be used for deflection and/or containment, and approx. 310 boph (potentially 616 boph when using enhanced recovery tactics) of de-rated skimmer capacity. This equipment can be deployed to protect sensitive areas based upon the priority list established by resource trustees working within the IMT. Nearshore containment and recovery tactics are used when oil threatens sensitive environmental areas or areas of public concern. Sensitive areas in Cook Inlet are detailed in Part D – Sensitive Areas and Part G – Geographic Response Strategies (GRS) Maps in the Cook Inlet Subarea Contingency Plan as Most Environmental Sensitive Area (MESA) Maps. Through reference of the NOAA Environmental Sensitivity Index maps for Cook Inlet, consideration of trajectory modeling results, and consultation with federal and state resource trustees, priority protection sites (PPS) and areas of immediate concern are established as follows: • CCI-08-01 East Forelands • CCI-22-01 Swanson River (equipment cache staged) • CCI-07-01 Nearshore waters of the Kenai River • CCI-06-02 Nearshore waters of the Kasilof River Logistics activates the Contracted Vessel Program and, within 12 hours, mobilizes resources to implement protection strategies for these sites. Operations assign four (4) strike teams to perform nearshore free oil containment and recovery. Each strike team consists of two (2) CVs that use a variety of boom configurations and collection strategies to maximize containment and recovery operations in the nearshore environment. Each strike team is also resourced with up to 660 ft of boom and a skimmer (or skimmers) for oil recovery. Because these strike teams are by design more agile and mobile than other larger assets, the individual teams may be reassigned to other sites dependent upon the spill trajectory. The Contingency Task Force also implements nearshore tactics to supplement the strike team's function to protect sites that are identified as priority protection sites	Figure 1.6-1 Table 1.6-4 CTM CI-SA-1 CI-SA-2 CI-NS-2 CI-NS-3 CI-NS-4 CI-NS-5 CI-NS-6 CI-LP-4 CI-LP-5 Appendix A Table 1.6-3 Table 1.6-4

Table 1.6-2 Response Strategy, Platform C Well Blowout – Summer Conditions, continued

Element	Response Strategy	Reference
(vi) Spill Containment and Control Actions	Actions to contain, control and recover the spilled oil including, as applicable, boom deployment strategies and other methods are addressed in the CISPRI technical manual. Strategies for Containment and Control for on-water spill.	CTM CI-OW-1 CI-OW-6 CI-NS-1 CI-NS-2
(vii) Spill Recovery Procedures	Safety of workers from accident or exposure takes precedence over all recovery activities. Implement open water and contingency task forces for most effective response. The Contingency Task Force is positioned down current of the open water task force to target oil that may escape primary response assets and to target oil in the waters near priority protection sites. The objective for the Contingency Task Force is to minimize the spread of oil and concentrate it for recovery. The TF uses inland water boom to concentrate oil for recovery. Maximum swath width is attained as Class 3 vessels tow 600 ft sections of gated boom for oil concentration	CTM CI-OW-1 CI-OW-3 CI-OW-6 CI-NS-1 CI-NS-2 Table 1.6-3 Table 1.6-4
(viii) Lightering Procedures	Not applicable.	N/A
(ix) Transfer and Storage of Recovered Oil/Water; Volume Estimating Procedure	Initially, oil will be collected and stored aboard the recovery vessels or associated storage barges and then transferred to a large storage barge (Response/Lighting Barge). The large storage barges will be emptied to on-shore oil storage tanks at Drift River facility (b) (7)(F) [REDACTED]. The Response/Lighting Barge has fixed onboard pumps and proper connections for vessel-to-dock transfers. Oiled sorbents, Tyvek suits, and other consumables will be double-bagged onboard the vessels and stored in appropriate lined boxes until they can be transferred ashore. Oiled debris, etc. will be stored on-deck of vessels or barges, in open-hopper barges, or other appropriate sites. These areas will be properly lined. The debris will then be transferred to lined tanks, bins, pits, etc. on-shore. XTO negotiates agreement with KPL Dock to receive the recovered oil/water from the spill response operations. The recovered fluids will be stored in onshore storage tanks until an accounting process, is completed. This accounting process is approved by the UC through the Waste Management Plan. Fluids then separated with recovered oil being handled as crude oil. Water to be properly disposed of.	STAR Manual Tactics MST CTM Appendix D Tactics CI-WM through CI-WM-7
(x) Plans, Procedures, and Locations for Temporary Storage and Disposal	Recovered oil will be sold as crude oil as soon as oil accounting agreement is reached with ADEC. XTO will secure Temporary Waste Storage Permits for oily debris and submit a Waste Management Plan with emphasis on local incineration of oily absorbents and debris. Temporary on-land sites for debris (dumpsters, pits, ore bins, etc.) will be lined to hold oiled debris with proper permitting in place.	CTM Appendix D Tactics CI-WM through CI-WM-7 Section 3.1

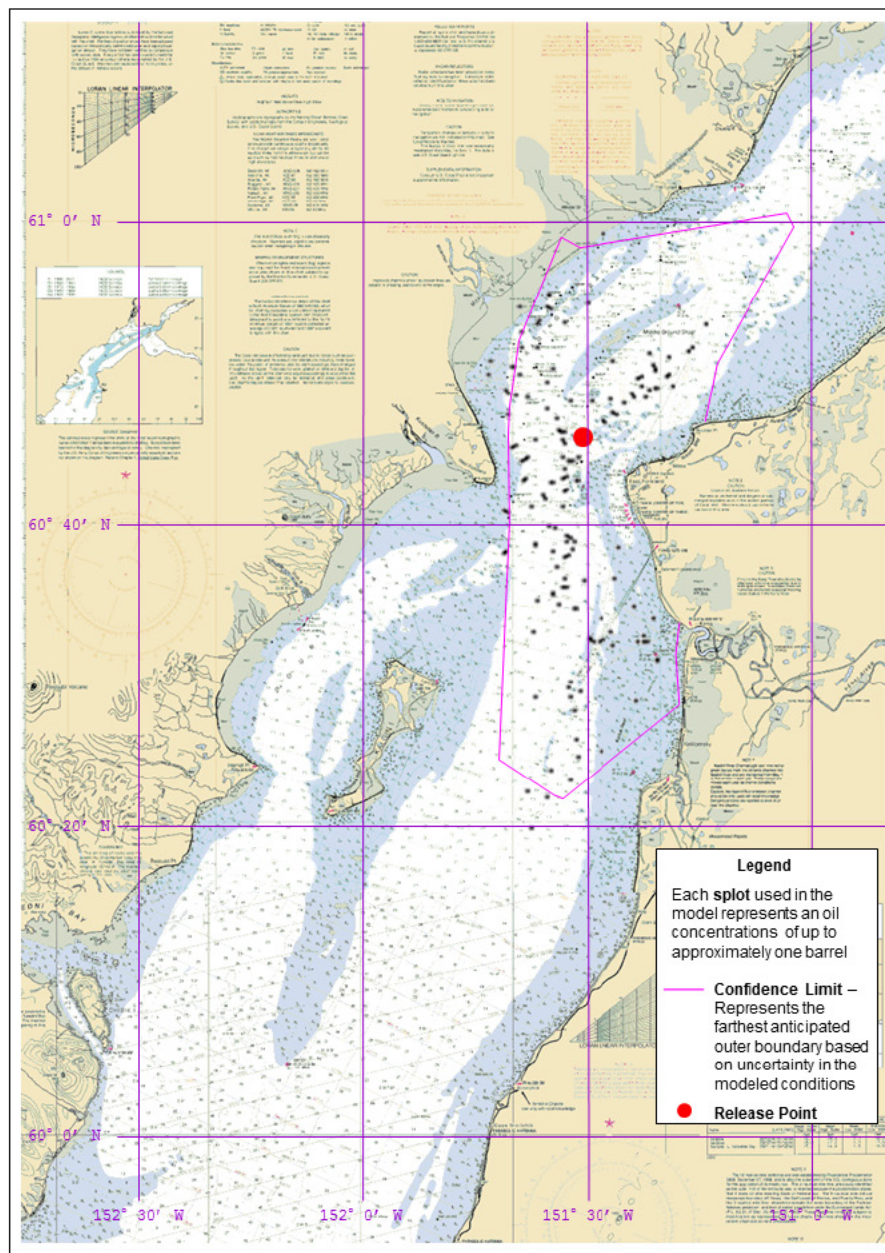
Table 1.6-2 Response Strategy, Platform C Well Blowout – Summer Conditions, continued

Element	Response Strategy	Reference
(xi) Wildlife Protection Plan	Priority protection site selection will provide for special consideration to the wildlife in the area. Established GRS in Central and upper Cook Inlet will be implemented dependent upon prioritization of the sites by resource trustees and agency representatives. These GRS provide for habitat and resource protection. Activation of bird hazing, capture, and rehabilitation personnel and facilities occurs with their being put on standby, and then activated, if required. Wildlife tactics and equipment will target wildlife populations in the region. Mobile units may be established, tactics and equipment will be species-specific. Marine mammal populations in the region include harbor seals at West Forelands, Beluga whales at Redoubt Bay. Certain species of shore birds are present in the Trading Bay area during the summer months. Contact should be limited because hatchlings have left the nest and discharged product would be at the lower tidal stages. Anadromous streams in the area will be given first priority. Actions are established and supervised by ADF&G, USF&W and other appropriate resource trustees.	CTM Tactics CI-W Through CI-W-5
(xii) Shoreline Cleanup Plan	Not applicable	N/A

Figure 1.6-1 Summer Oil Spill Trajectory at Hour 72

This Gnome-modeled oil spill trajectory depicts the potential spread of oil at hour 72 without the benefit of containment and recovery operations. At hour 72, the trajectory shows shoreline contact occurs just south of East Forelands.

Time	Released Volume	Floating	Beached	Evap / Disp
0800 07/10/2010 (72 hrs)	210 bbls (b) (7)(F)	156 bbls	2 bbls	52 bbls



As demonstrated in the scenario and Table 1.6-3, nearshore and offshore assets are capable of providing sufficient oil recovery for shoreline protection. Where appropriate, GRS are implemented as a contingency.

Table 1.6-3 MGS Platform C Blowout Scenario – Oil Recovery Timeline – Summer Conditions

Hour	1 – 2	3 – 4	5 – 6	7 – 8	9 – 10	11 – 12	13 – 14	15 – 16	17 – 18	19 – 20	21 – 22	23 – 24
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators		64	64	64	64	64		64	64	64	64	64
OSV, 56-30 Disc Skimmer (142 boph), Response/Lightering Barge			284	142	284	142	284	142	284	142	284	142
Utility Vessel, 13-30 Disc Skimmer (32 boph) 1 – Mini Barge			64	64	64	64	64		64	64	64	64
Utility Vessel, 2 – Front Collector Brush Skimmers (52 boph) 2 – Mini Barges									104	104		104
Period Recovered Fluids		64	412	270	412	270	348	206	516	374	412	374
Cumulative Total		64	476	746	1,158	1,428	1,776	19,82	2,498	2,872	3,284	3,658

Total Fluids in First 24 Hours 3,658 bbl

Recovery capacity dependent upon skimmer efficiency and interim storage capacity (CI-LP-4).

Offload rate DOP 250 = 651 boph capacity (CI-LP-4).

Disc skimmer packages may be paired with appropriate buster boom for enhanced recovery capacity (Tactics CI-OW-6, CI-NS-2)

Table 1.6-3 (continued) – MGS Platform C Blowout Scenario – Oil Recovery Timeline – Summer Conditions

Hour	25 – 28	29 – 32	33 – 36	37 – 40	41 – 44	45 – 48	49 – 52	53 – 56	57 – 60	61 – 64	65 – 68	69 – 72
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators	64	128	128	64	128	128	64	128	128	64	128	128
OSV, 56-30 Disc Skimmer (142 boph), Response/Lightering Barge	426	426	426	426	426	426	426	426	426	426	426	426
Utility Vessel, 13-30 Disc Skimmer (32 boph) 1 – Mini Barge	64	128	128	64	128	128	64	128	128	64	128	128
Utility Vessel, 2 – Front Collector Brush Skimmers (52 boph) 2 – Mini Barges	208	208	104	208	208	104	208	208	104	208	208	104
Period Recovered Fluids	762	890	786	762	890	786	762	890	786	762	890	786
Cumulative Total	4,420	5,310	6,096	6,858	7,748	8,534	9,296	10,186	10,972	11,734	12,624	13,410

CISPRI's response capability greatly exceeds the required recovery rate, as shown in Tables 1.6-3. This scenario shows a very aggressive response where skimmers deployed exceed the RPS. Response will continue, as directed by Unified Command, until source control is secured and recovery operations are complete.

Table 1.6-4 Spill Response Resources – Platform C Well Blowout – Summer Conditions

SPILL RESPONSE RESOURCES TABLE	Open Water T. F. # 1	Contingency T.F. # 1	Strike Teams - PPS	WILDLIFE	DISPOSAL	SAFETY	TOTALS
EQUIPMENT LIST							
Offshore Task Force							
OSRV with 13-30 Disc Skimmer, two 215 bbl oil/water separators, and 1300' ocean containment boom	1						1
OSV with 56-30 Disc Skimmer, two 215 bbl oil/water separators	1						1
Response/Lighting Barge	1						1
Class 8 towing vessel (tug)	2						2
Class 3 vessels (steel or aluminum)	3	3					3
Personnel	3/25						3/25
Contingency Task Force							
Utility Vessel w/ two Front Collector Brush Skimmers and two Mini Barges		1					1
Utility Vessel w/ 13-30 Disc Skimmer and Mini Barge		1					1
Cook Inlet Capable (CIC) 1		1					1
CIC 2		1					1
Class 2 vessel		1					1
10" X 12" Inland water boom		2,000'					2,000'
Personnel		1/10					1/10
Strike Teams – Nearshore & PPS							
Class 3/4 Vessels (see CI-LP-5 for vessel crew assumptions)			8				8
Boom – Ro-Boom			660'				660'
Boom – Nearshore			1,980'				1,980'
Skimmers			4				4
Wildlife							
Class 2 Command/ Support Vessel (if needed)				1			1
Vessels for capture/ hazing				1			1
Personnel				1 / 4			1 / 4
Onshore Waste Handling and Decon							
Personnel					1/5		1/5
Safety/Logistics							
Class 2 Vessel						1	1
Personnel						2	2

1.6.2 Winter Conditions

Table 1.6-5 Conditions, Platform C Well Blowout – Winter Conditions

Initial Conditions	
Spill Location:	Middle Ground Shoal, Platform C
Spill Time:	Winter, December, 08:00
Cause of Spill:	The XTO Platform C oil production platform experiences an uncontrolled well release and is unable to control the flow from the platform.
(b) (7)(F)	
Type of Spilled Oil:	Cook Inlet crude oil; 34.5° API
Wind Speed:	10 kts NE
Air Temperature:	15° F
Seas:	Calm
Visibility:	10 miles
Surface:	Cook Inlet
Spill Trajectory:	Once the oil breaches containment on the platform, it flows off the platform, landing on ice and water beneath the platform and begins to move north on the flood tide. The larger ice pans moving under the platform are broken up into smaller pans by the legs of the platform, thus the oil will land on pans less than 20' in diameter, and in the open water interstices of the ice/water matrix. With a nominal wind, the oil may be sprayed as much as 50 to 100 yards from the platform in the direction in which the wind is blowing. Cook Inlet is complex and has three major rip zones or strong tidal currents, which occur, along marine water convergent or divergent zones. Oil will move into and travel along these rips at speeds of up to 6 knots. (See Figure 1.6-1) The trajectory is modeled using historical winter wind data with directions of NNE (67% of the time), NE (22 %), and then N (11%) at 7.7kts. (See Figure 1.6-2) In tandem with the use of trajectory modeling, tracking buoys and visual observations are used to update and validate the trajectory analysis. The CTM Appendix B also outlines predominant weather conditions in Cook Inlet.
Tidal Stage:	Flood

Table 1.6-6 Response Strategy, Platform C Well Blowout – Winter Conditions

Element	Response Strategy	Reference
Description	The following scenario depicts typical response activities during an oil spill response in moderate sea ice conditions. The XTO Platform C oil production platform experiences an uncontrolled well release and is unable to control the flow from the platform. Based upon the known pressures of this well flowing unassisted, XTO expects 70 bbl of oil to be initially unloaded from the tubing, tapering to less than 5 bbl per day once gas lift is shut down. For the purposes of this scenario a worst-case flow rate of 70 bbl of oil per day for a 30-day period is used for a maximum release of 2,100 bbl of oil to meet BSEE's requirements. This total volume exceeds ADEC's 15-day requirement. It is also assumed that this volume is actually lost to water. This scenario is very conservative. Due to the very low reservoir pressure, XTO does not expect the oil to be blown into the air from the release point. There is a well covering over the wellhead and this low-pressure, low-flow rate well would be released into a covered housing and collect in a sump. From the wellhouse sump, the oil would be transferred by pipeline to shore.	CTM App-B Part 5
(i) Stopping Discharge at Source	Production wells are equipped with SSVs and SCSSSVs in accordance with the regulations of the AOGCC in 20 AAC 25.265. The flowlines from the platforms to shore have both manual and automatic pipeline isolation valves. The XTO drilling department will implement plans to control the well as described below. Production wells are controlled with SSVs and SCSSSVs as described above. If well control is lost during drilling operations, resulting in an uncontrolled flow of fluids at the surface, detailed planning will begin to regain control will include three primary considerations: • Additional surface control measures, • Well capping; and • Drilling a relief well.	Section 2.1.10 Section 2.1.7 Section 1.5.4
(ii) Preventing or Containing Fire Hazards	The on-duty Production Operator ensures that all sources of ignition are shut down or removed from the area. Fire hazards are controlled by restricting access to the spill area and ensuring that potential sources of ignition are eliminated. TF-1 OSRV performs an initial site assessment prior to commencing spill containment and recovery operations.	Section 1.3 CTM Tactics CI-S to CI-S-6
(iv) Surveillance and Tracking of Oil; Shoreline Contact Points	Upon notification, CISPRI immediately activates its contract with Rediske Air and an aerial overflight is performed. Visual and infrared sensor information is conveyed back to the Command Center to assist in tracking oil in the ice and direct the response vessels to the heaviest concentrations of the slick. Subsequent overflights are scheduled as needed to monitor the slick and provide direction to responders throughout the response. Tracking buoys and lighted strobe buoys are deployed from response vessels as needed. Ice forecast are obtained through the National Ice Center website at http://www.natice.noaa.gov	CTM Tactics CI-TS-1 CI-TS-2 CI-TS-4 CI-LP-3 CI-LP-4 Figure 1.6-2

Table 1.6-6 Response Strategy, Platform C Well Blowout – Winter Conditions, continued

Element	Response Strategy	Reference
(v) Exclusion Procedures	Cook Inlet shorelines in winter months become armored with sea ice, which provides a protective buffer and limits potential shoreline contact. Parallel currents at the shoaling areas also serve to limit oil contact with shorelines. Based upon the trajectory and ice forecast, priority protection sites are identified in the Environmental Unit in consultation with federal and state natural resource trustees. Resources to implement specific GRS are mobilized as a prevention measure. These GRS are: • CCI-08-01 East Forelands • CCI-22-01 Swanson River (equipment cache staged) • CCI-07-01 Nearshore waters of the Kenai River • CCI-06-02 Nearshore waters of the Kasilof River	CTM Tactic CI-SA-1 to CI-SA-3
(vi) Spill Containment and Control Actions	In moderate ice conditions at the time of the spill, oil concentrates in open leads. TF-1 OSRV targets this oil using ice as containment and short sections of boom when ice conditions allow.	CTM Tactic CI-OW-2
(vii) Spill Recovery Procedures	Safety of workers from accident or exposure takes precedence over all recovery activities. Implement open water and contingency task forces for most effective response. The Contingency Task Force will be located south of the open waters task force to collect oil in areas with ice concentrations 3/10ths or lower. After safety, the primary objective for Operations is to minimize the spread and containment of the spill. Contaminated sea ice will be cleaned using high volume low pressure water wash provided by fire hoses/monitors. The product will be removed from the ice and recovered in the water as free product. Another alternative to clean ice is to extend a Foxtail skimmer over the ice via crane and allowing the foxtail to recover the oil. Institute use of concentration booming using inland water boom to increase swath width in capturing oil (if ice conditions allow). Class 3 vessels can be used to tow 600' sections of gated boom to concentrate oil. They can be extremely mobile to take advantage of expanding/shrinking ice leads near the open water skimmers. Minimal shoreline impact is expected due to ice armor. If impact is probable, emphasis will be placed on environmentally sensitive areas.	CTM Tactics CI-OW-1 CI-OW-2 CI-OW-6 CI-NS-1 CTM App-B-1 Table 1.6-7 And Table 1.6-8
(viii) Lightering Procedures	Not applicable.	N/A
(ix) Transfer and Storage of Recovered Oil/Water; Volume Estimating Procedure	Oil will be initially collected and stored aboard the recovery vessels or associated storage barges and then transferred to a response/lightering barge The response/lightering barge will be emptied to on-shore oil storage tanks at Drift River facility (250,000 bbl – Redoubt Bay), Chevron facility (25,000 bbl – Anchorage), or Tesoro Refinery/KPL (25,000 bbl – Nikiski). The Response / Lightering Barge has fixed onboard pumps and proper connections for vessel-to-dock transfers. XTO negotiates agreement with KPL Dock to receive the recovered oil/water from the spill response operations. The recovered fluids will be stored in onshore storage tanks until an accounting process is completed. Recovered fluids are processed in the production system and the crude oil sold. The water is treated and discharged to Cook Inlet under the provisions of the facility's existing NPDES permit.	CTM Tactics CI-OW-5 Star Manual Tactic MST

Table 1.6-6 Response Strategy, Platform C Well Blowout – Winter Conditions, continued

Element	Response Strategy	Reference
(x) Plans, Procedures, and Locations for Temporary Storage and Disposal	Recovered oil will be sold as crude oil as soon as oil accounting agreement is reached with ADEC. XTO will secure Temporary Waste Storage Permits for oily debris and submit a Waste Management Plan with emphasis on local incineration of oily absorbents and debris. Oiled sorbents, Tyvek suits, and other consumables will be double-bagged onboard the vessels and stored in appropriate lined boxes until they can be transferred ashore. Oiled debris, etc. will be stored on-deck of vessels or barges, in open-hopper barges, or other appropriate sites. These areas will be properly lined. The debris will then be transferred to lined tanks, bins, pits, etc. on-shore. Temporary on-land sites for debris (dumpsters, pits, ore bins, etc.) will be lined to hold oiled debris with proper permitting in place. Oiled debris and sorbents will be disposed of in XTO's incinerator at the Onshore Facility under the direction of the Onshore Response Unit Leader. Two concrete pads that can be used for staging areas are available adjacent to the XTO incinerator. One pad is 30' x 45' and the other pad is 40' x 45'. These pads would be covered with Visqueen when used as staging for spill response. CISPRI provides for decontamination of response equipment.	CTM Tactics CI-LP-6 CI-WM to CI-WM-7 CTM App-D
(xi) Wildlife Protection Plan	Special consideration is given to the wildlife in the area and a wildlife task force is activated. Wildlife tactics and equipment will target wildlife populations in the region. Mobile units may be established, tactics and equipment will be species-specific. Activation of bird hazing, capture, and rehabilitation personnel and facilities occurs with their being put on standby, and then mobilized as needed. Marine mammal populations in the region include harbor seals at West Forelands, Beluga whales at Redoubt Bay. Anadromous streams in the area will be given first priority and Geographic Response Strategies will be implemented as required. Actions are established and supervised by ADF&G, USF&W and other appropriate resource trustees.	CTM Tactics CI-LP-6 CI-W to CI-W-5
(xii) Shoreline Cleanup Plan	Not applicable	N/A

Figure 1.6-2 Winter Oil Spill Trajectory at Hour 72

The spill trajectory below depicts the potential spread of oil without the benefit of recovery and containment operations. As demonstrated in the scenario and Table 1.6-7, nearshore and offshore assets are capable of providing sufficient oil recovery for shoreline protection.

Time	Released Volume	Floating	Beached	Evap / Disp
0800 12/04/2010 (72 hrs)	210 bbls (b) (7)(F)	158 bbls	0 bbls	52 bbls

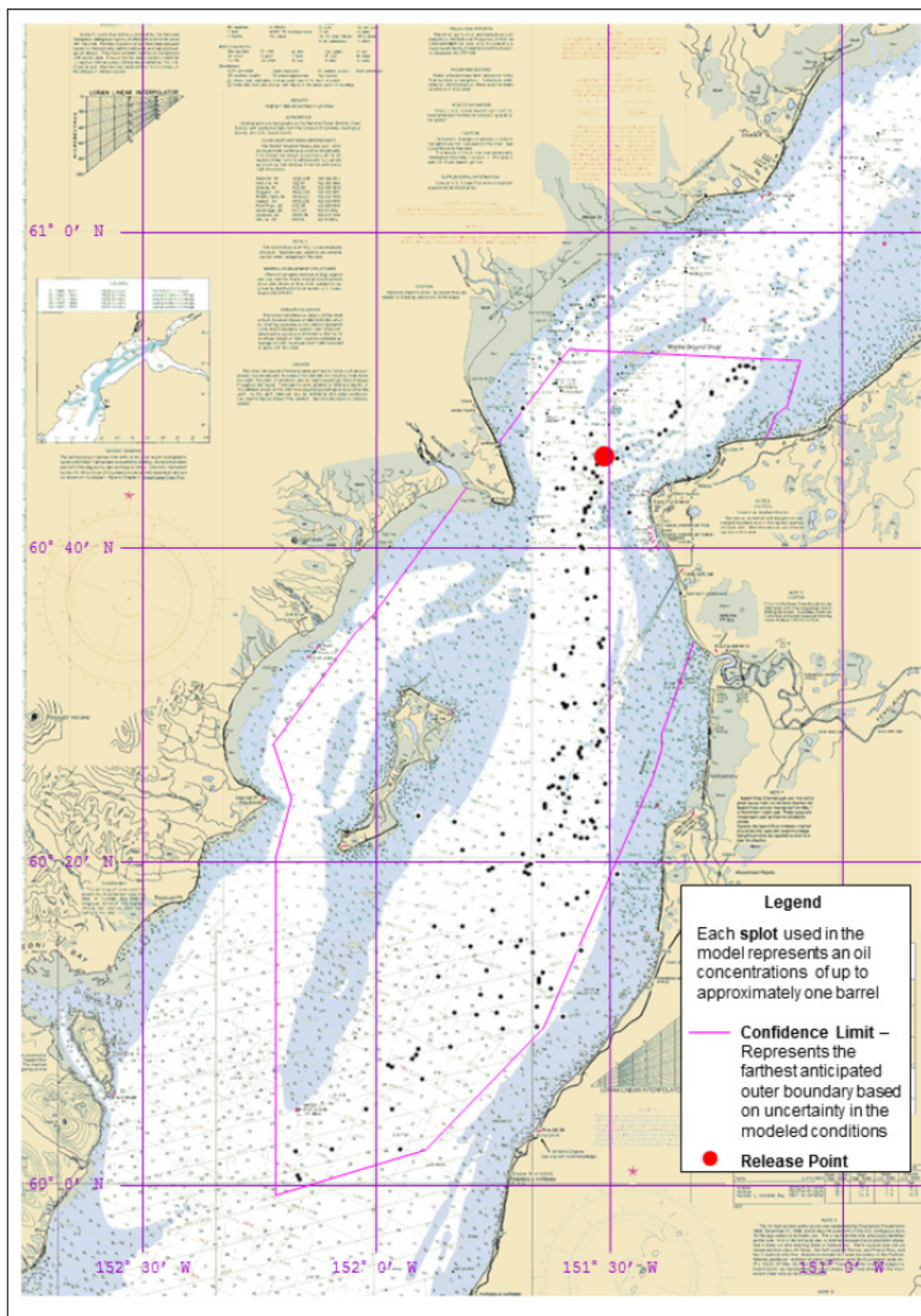


Table 1.6-7 MGS Platform C Blowout Scenario – Oil Recovery Timeline – Winter Conditions

Hour	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators			64	64	64	64	64		64	64	64	64
OSV, 56-30 Disc Skimmer (142 boph), 2 – 215 bbl o/w separators				284	142	284	142	284	142	284	142	284
Utility Vessel, 13-30 Disc Skimmer (32 boph) 1 – Mini Barge			64	64	64	57		64	64	64	57	
Utility Vessel, 2 – Front Collector Brush Skimmers (52 boph) 1 – Mini Barge									104	104	41	
Period Recovery Total			128	412	270	405	206	348	374	516	304	348
Cumulative Total			128	540	810	1,215	1,421	1,769	2,143	2,659	2,963	3,311
Volumes based upon the skimmer's derated recovery capacity as documented in the CTM Tactic CI-LP-4. Skimmer downtimes account for vessel transit to Response Barge (anchored in Nikiski Bay) and offload time. Offload time based upon DOP 250 capacities - 342 gpm or ~ 651 boph. (CI-LP-4). CISPRI has 5 DOP 250 submersibles. The OSRV is authorized by the U.S. Coast Guard via the U.C. to use below-deck storage increasing interim storage by 2,500 bbl to total 2,715 bbl. This provides the OSRV capacity to continue skimming for over 24 hours before need to offload. During winter months, the Utility Vessel is mobilized from Kachemak Bay and transits to Nikiski, load out. and initiates recovery operations within 16 hours.												

Table 1.6-7 (continued) – MGS Platform C Blowout Scenario – Oil Recovery Timeline – Winter Conditions

Hour	25 – 28	29 – 32	33 – 36	37 – 40	41 – 44	45 – 48	49 – 52	53 – 56	57 – 60	61 – 64	65 – 68	69 – 72
OSRV, 13-30 Disc Skimmer (32 boph) 2 – 215 bbl o/w separators	64	128	128	64	128	128	64	128	128	64	128	128
OSV, 56-30 Disc Skimmer (142 boph), 2 – 215 bbl o/w separators	426	426	426	426	426	426	426	426	426	426	426	426
Utility Vessel, 13-30 Disc Skimmer (32 boph) 1 – Mini Barge	128	121	64	128	57	128	121	64	128	57	128	121
Utility Vessel, 2 – Front Collector Brush Skimmers (52 boph) 1 – Mini Barge	208	41	208	41	208	41	208	41	208	41	208	41
Period Recovered Fluids	826	716	826	659	819	723	819	659	890	588	890	716
Cumulative Total	4,137	4,853	5,679	6,338	7,157	7,880	8,699	9,358	10,248	10,836	11,726	12,442

Note: This scenario shows a very aggressive response where the recovery capacity of the skimmers deployed exceeds that needed to meet the RPS. Recovery operations would continue as directed by the UC.

Table 1.6-8 Spill Response Resources – Platform C Well Blowout – Winter Conditions

SPILL RESPONSE RESOURCES TABLE	Open Water T. F. # 1	Contingency T.F. # 1	WILDLIFE	DISPOSAL	SAFETY	TOTALS
EQUIPMENT LIST						
Offshore Task Force						
OSRV with 13-30 Disc Skimmer, two 215 bbl oil/water separators, and 1300' ocean containment boom	1					1
OSV with 56-30 Disc Skimmer, two 215 bbl oil/water separators	1					1
Response/Lightering Barge	1					1
Class 8 towing vessel (tug)	2					2
Class 3 vessels (steel or aluminum)	3	3				3
Personnel	3/25					3/25
Contingency Task Force						
Utility Vessel w/ two Front Collector Brush Skimmers and mini barge		1				1
Utility Vessel w/ 13-30 Disc Skimmer and mini barge		1				1
Cook Inlet Capable (CIC) 1		1				1
CIC 2		1				1
Class 2 vessel		1				1
10" X 12" Inland water boom		2,000'				2,000'
Personnel		1/10				1/10
Wildlife						
Class 2 Command/ Support Vessel (if needed)			1			1
Vessels for capture/ hazing			1			1
Personnel			1 / 4			1 / 4
Onshore Waste Handling and Decon						
Personnel				1/5		1/5
Safety/Logistics						
Class 2 Vessel					1	1
Personnel					2	2

1.7 Non-mechanical Response Options

The use of non-mechanical response options may be considered to augment mechanical response techniques. Tactical and logistical considerations for implementing in situ burning or applying dispersant are contained in CISPRI's Technical Manual, Tactics CI-NM through CI-NM-3, CI-LP-3, and CI-LP-4.

Additional information is provided as Section 3.8 of this Plan.

1.7.1 Obtaining Permits and Approvals

The XTO Incident Commander will discuss the option of using non-mechanical response techniques with the federal and state on-scene coordinators. The Alaska Regional Response Team (RRT) checklist will be filled out. Dispersants will be considered for use according to the RRT dispersant use criteria for Cook Inlet Dispersant and in situ burn application forms with instructions for their use can be found in the Permits program available on the ADEC website at: <http://www.dec.state.ak.us/spar/perp/permits/index.htm>. Once a permit is in place to apply dispersants or implement in situ burning, the Operations Section Chief will determine the best tactical approach and the resources will be mobilized and deployed. The effectiveness of the application will be monitored and relayed back to the Unified Command.

1.7.2 Decision Criteria for Use

In-situ burning will be considered under conditions such as the following:

- Mechanical recovery is impractical or ineffective;
- Shorelines are threatened;
- Burning would augment the oil elimination capacity of mechanical recovery;
- Present and forecast wind conditions will carry the smoke plume away from populated areas; and
- A successful test burn has been conducted.

Dispersants will be considered under conditions such as the following:

- Mechanical recovery is impractical or ineffective;
- Shorelines are threatened;
- Dispersant use would augment the oil elimination capacity of mechanical recovery;
- Adequate supplies of dispersant can be obtained;
- The oil is in a zone pre-approved for dispersant use; and
- A successful test of the dispersant has been conducted.

1.7.3 Implementation Procedures

If the XTO Incident Commander decides to use either in-situ burning or dispersants and obtains the necessary authorization, CISPRI will carry out the response.

1.7.4 Required Personnel and Equipment

Personnel and equipment required for non-mechanical response operations are described in the CISPRI Technical Manual Tactics CI-LP-4, Tables 8 through 11; CI-LP-3, Table 6; and CI-NM through CI-NM-5.

1.8 Facility Diagrams

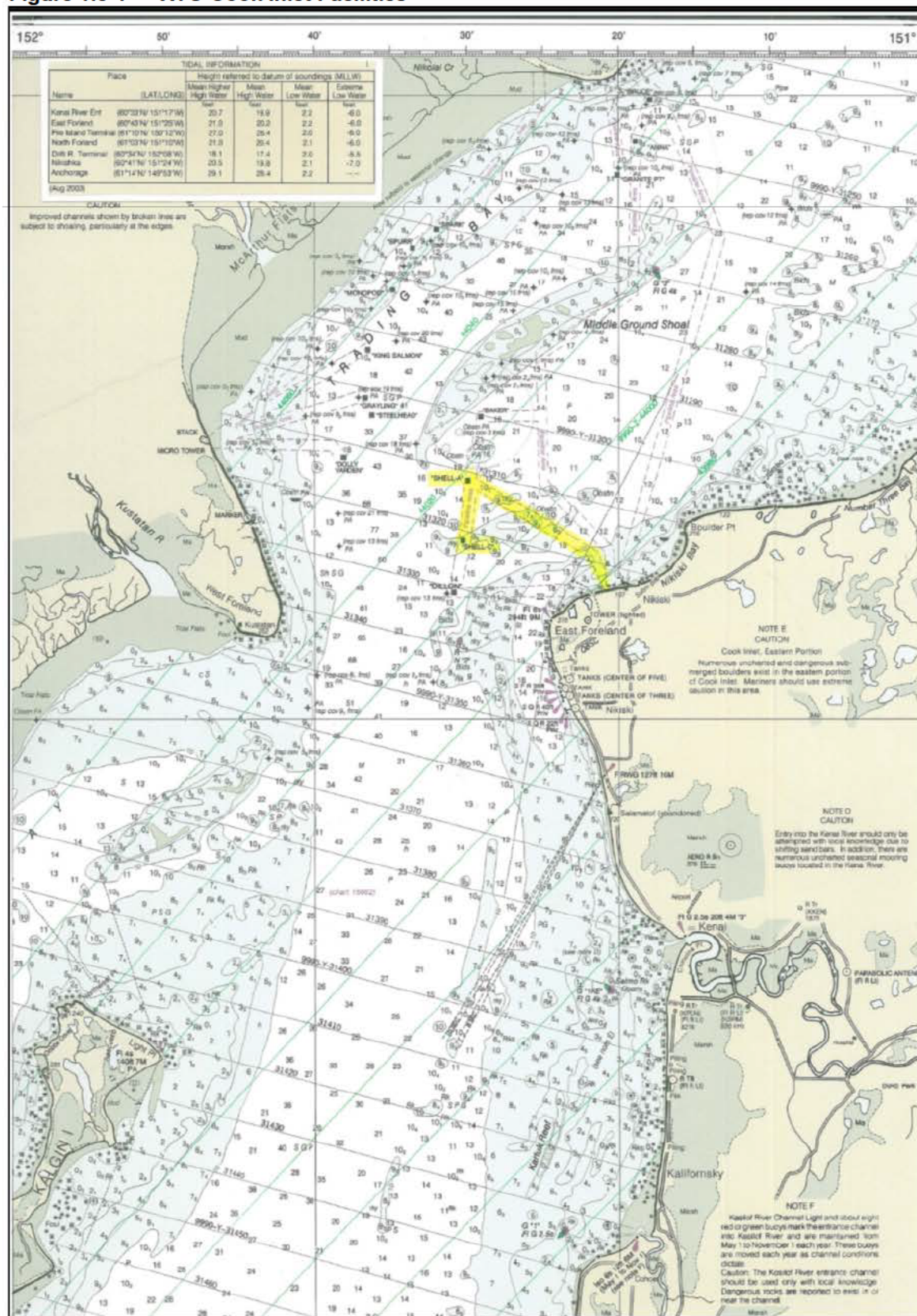
Facility Diagrams are provided in Figures 1.8-1 through 1.8-7.

Locations of response equipment are provided Tactic CI-LP-4 and Appendix A of the CTM. Mapped transit distances and relative times (land, marine, and air) are portrayed in Tactic CI-LP-1 in the CTM. Roads and Staging Areas in Cook Inlet are depicted in Figure 3.5-1

Additional identification of Cook Inlet mooring areas, identified as Potential Places of Refuge, are found online at <http://www.dec.state.ak.us/spar/perp/cookinletpor/cippormap02.pdf>.

Reference Section 2.1.11 for tank information and layouts of onshore secondary containment areas.

Figure 1.8-1 XTO Cook Inlet Facilities



PART 2 PREVENTION PLAN 2-1

2.1	PREVENTION TRAINING PROGRAMS	2-1
2.1.1	JOB SPECIFIC PREVENTION TRAINING	2-1
2.1.2	SUBSTANCE ABUSE PROGRAM.....	2-2
2.1.3	MEDICAL PROGRAM.....	2-2
2.1.4	SECURITY PROGRAM.....	2-3
2.1.5	TRANSFER PROCEDURES	2-3
2.1.6	OPERATING REQUIREMENTS FOR EXPLORATION AND PRODUCTION FACILITIES.....	2-4
2.1.7	PLATFORM WELL CONTROL AND EMERGENCY SHUTDOWN	2-5
2.1.8	GENERAL INSPECTION PROCEDURES	2-7
2.1.9	PLATFORM SPILL PREVENTION SYSTEMS.....	2-7
2.1.10	LEAK DETECTION, MONITORING AND OPERATING REQUIREMENTS FOR FLOWLINE SURVEILLANCE.....	2-8
2.1.11	OIL STORAGE TANKS.....	2-8
2.1.12	SECONDARY CONTAINMENT AREAS FOR OIL STORAGE TANKS	2-14
2.1.13	PIPELINE INTEGRITY MANAGEMENT PROGRAM.....	2-16
2.2	DISCHARGE HISTORY (>55 GAL).....	2-22
2.3	POTENTIAL DISCHARGE ANALYSIS	2-24
2.4	OPERATIONAL CONDITIONS INCREASING RISK OF A SPILL	2-25
2.4.1	PLATFORMS AND ONSHORE FACILITY	2-25
2.4.2	PIPELINES.....	2-26
2.5	DISCHARGE DETECTION	2-26

TABLES

TABLE 2.1-1	MGS WELL CONTROL SYSTEMS AND EQUIPMENT.....	2-6
TABLE 2.1-2	MIDDLE GROUND SHOAL OIL STORAGE TANK INSPECTION SCHEDULE	2-10
TABLE 2.2-1	MIDDLE GROUND SHOAL SPILL HISTORY*.....	2-22
TABLE 2.3-1	ANALYSIS OF POTENTIAL DISCHARGES.....	2-24
TABLE 2.5-1	MIDDLE GROUND SHOAL DISCHARGE DETECTION SYSTEMS.....	2-27

FIGURES

FIGURE 2.1-1	ONSHORE SURGE TANKS DETAIL WITH SECONDARY CONTAINMENT AND LEAK DETECTION SYSTEMS	2-13
FIGURE 2.1-2	ONSHORE SUMP TANKS SECONDARY CONTAINMENT	2-15
FIGURE 2.1-5	OFFSHORE PIPELINE SCHEMATIC	2-18
FIGURE 2.1-6	ON SHORE FACILITY FLOW DIAGRAM	2-20
FIGURE 2.1-7	IMPRESSED CURRENT SYSTEM	2-21

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

PART 2 PREVENTION PLAN

This section contains detailed descriptions of XTO prevention training, inspection, and maintenance programs for the Middle Ground Shoal (MGS) facilities.

2.1 Prevention Training Programs

XTO's spill prevention training programs ensure all XTO employees and contractors are properly trained in spill prevention according to their job responsibilities. Operations and maintenance personnel are trained to properly operate and maintain oil spill prevention equipment. Spill prevention concerns are addressed at weekly safety meetings, as required.

2.1.1 Job Specific Prevention Training

XTO and XTO contract personnel are trained in company and state pollution prevention measures applicable to their duties as required by Title 18 of the Alaska Administrative Code (AAC), Chapter 75 Article 1, specifically 18 AAC 75.020. Each participant signs a training roster that contains the title of the training, the course length, objectives, date, and instructor. XTO maintains and manages the training as well as the training records through the use of a computerized program. Records are kept for a minimum of five (5) years and for as long as the individual is assigned duties under the response plan. Records are made available for agency review upon request.

With the exception of specific XTO facility training, each contractor maintains their own training records. Qualifications to perform work at XTO facilities are validated prior to hire. XTO's spill prevention training is summarized as follows:

Oil Discharge Prevention & Contingency Plan (ODPCP) Training: ODPCP training is a formal review of the written ODPCP. The training emphasizes any changes that have been made to spill prevention equipment or that affect spill risk exposure. All operations personnel attend this annual training. The supervisor reviews fundamental operating procedures and techniques used to prevent spills. The ODPCP is covered section by section, and employees discuss possible oil spill sources and causes in their work areas. Specific topics covered may include equipment inspections, source control, containment areas, and drain systems.

Fuel Transfer Training: The purpose of this training is to ensure that employees know the proper procedures for transferring fuel from the supply vessel to the platforms. The XTO Marine Transfer Operations Manual (approved by the U.S. Coast Guard) is reviewed annually with operations personnel, as well as with contractors responsible for fuel transfers. Training topics include emergency shutoff procedures; valve locations; reduced pumping rates at the beginning and end of fuel transfers; vessel communications; and the roles and responsibilities of the emergency valve person and XTO person-in-charge.

Facility Orientation Films (Onshore / Offshore): The facility orientation films inform personnel entering XTO facilities about safety policies and spill prevention. All XTO and contract personnel must view the film before entering the Onshore Facility or the platforms. The film includes emergency notification procedures, spill prevention, immediate cleanup of any spills and lockout/tagout procedures and work permits that are required whenever anyone is working on production piping or vessels. Personnel are required to review the film annually.

Lockout/Tagout Training: The objective of the lockout / tagout training is to make sure employees are not injured when work is being conducted. This training ensures personnel isolate stored pressure and prevent pipe and vessel oil releases. All XTO personnel and affected contractors are required to review XTO's lockout/tagout policy at least annually. A key element of this training program and policy is that pipelines and oil systems should be configured to stop oil from entering the environment.

Well Control School: The purpose of well control training is to ensure that well control problems are handled safely and to ensure oil does not escape to the environment. All XTO drilling foremen, contract toolpushers, and drillers will be current in this training prior to working on XTO facilities during drilling, workover, or coil tubing operations. While there are various programs and schools that provide well control training, accreditation is through the International Association of Drilling Contractors or IADC. Training includes emergency and spill prevention procedures and response equipment.

Work Permit Training: All employees receive annual training in the XTO work permit system. This training ensures work permit procedures are followed and spill prevention methods and response equipment are understood. XTO employees and contractors are required to obtain a safety work permit for all non-routine work that is of a critical nature. This could include activities such as tank/vessel cleaning, connection or disconnection of process equipment, or fuel transfers. The person performing the work is required to fill out the permit. An XTO operator or mechanic must review the permit and work area, and approve the permit if it is acceptable. The XTO person in charge must also review and sign the permit.

Operator Qualification (OQ) Program: XTO has developed and implemented an OQ Program to comply with DOT regulations at 49 CFR 195 for oil pipeline. The training program covers roughly 30 tasks specific to the operation and maintenance of pipelines that includes operation of XTO's leak detection system for the pipelines. Dependent upon the operation, training is required every 3 to 5 years dependent upon the task. XTO's OQ training is provided by a licensed third party trainer. The program manual is available that details this required employee and contractor-training program.

Inspections: XTO contracts third party, certified inspectors to complete all tank and piping inspections. A copy of each inspector's training certification is included in the final inspection report. Inspectors are required to show proof of certification to be qualified to perform inspection services for XTO.

2.1.2 Substance Abuse Program

XTO has a policy prohibiting the possession or use of illegal drugs or alcohol by anyone on company premises or anywhere on company business. To implement this policy, the company takes the following actions:

- Reasonable searches;
- Substance abuse testing (i.e., drug and alcohol testing);
- Random testing of employees in positions involving operating, maintenance, or emergency response on a Department of Transportation (DOT) pipeline; and
- Random testing of employees who return to work after treatment.

All XTO and contractor operating personnel must take a pre-employment drug test. Because all XTO MGS operating personnel and their supervisors qualify as operating, maintenance, or emergency response workers on a DOT pipeline, these personnel are included in a company-wide random drug testing pool. Names of personnel to be tested are drawn randomly by computer. Each year 25% of all XTO employees company-wide are tested. XTO contractors subject to DOT drug testing requirements must maintain a testing program that complies with DOT regulations.

2.1.3 Medical Program

XTO's medical program provides employees with the financial means to obtain preventive medical care and treatment for medical problems. XTO provides its employees with a liberal benefit package that includes funding of periodic preventive medical care for its employees. Preventive care coverage includes physical examinations, as well as routine injections and immunizations.

All MGS field personnel receive annual hearing tests and are required to fill out a respiratory protection health form each year covering such items as heart condition, breathing disorders, illnesses, etc. Any problems noted on the form may require written follow up from the employee's physician.

The XTO program also covers expenses for the following:

- Visits to primary care physicians;
- Visits to specialists;
- Diagnostic x-rays;
- Laboratory tests;
- Drugs and medicines prescribed for treatment of illness or injury; and
- Charges by a qualified psychologist for diagnosis and treatment of a mental or nervous disorder.

As a condition set forth in the HAZWOPER Compliance Manual, XTO requires medical monitoring for the following workers:

- All workers who wear a respirator for 30 or more days per year;
- Workers who are exposed to post-emergency cleanup operations, hazardous substances, or health hazards above the established permissible exposure limits (PELs) for more than 30 days in a year; and
- Any worker who is injured, impaired, or has developed signs and symptoms resulting from exposure to hazardous substances during an emergency incident.

Medical monitoring of any worker who meets the criteria stated above will entail an annual medical surveillance program meeting the requirements of 29 CFR 1910.120 (f)(3)(i) and/or medical examinations and consultations meeting the requirements of 29 CFR 1910.120 (f)(3)(ii).

(b) (7)(F)

2.1.5 Transfer Procedures

Platforms A and C have U.S. Coast Guard-approved Marine Transfer Operations Manuals covering the transfer of diesel fuel from the supply vessel to the platform girders on the facility. These manuals contain detailed descriptions of fuel transfer systems and procedures. Procedures found in these manuals address the relevant subsections of 18 AAC 75.025 listed below:

Fuel transfers must be overseen by an XTO person-in-charge: The XTO person-in-charge and the vessel master complete a Declaration of Inspection before the transfer takes place. Girder fuel levels are checked before and after transfers from the vessel. The transferred fuel volume is metered. Both the vessel and the platform have flow meters. The girder tanks have sight glasses to monitor the amount of fuel in the tanks. Each fuel transfer involves a predetermined volume. The transfer begins at a low pumping rate so that the vessel and platform can make sure their meters are reading the same before the

full pump rate is used. During the transfer, the XTO person-in-charge is in constant voice communication with the vessel master. A hose watch person is also on the platform to monitor the transfer and the filling of the tank. The main fuel valve on the platform and the fuel pump on the vessel are manned at all times during the transfer. As the preplanned transfer volume is approached, the pumping rate is slowed sufficiently to prevent overfill. The XTO person-in-charge, the hose watch, and vessel master all have radios. The emergency shutoff for the vessel pump is located in the wheelhouse. The XTO person-in-charge or the hose watch person can radio the vessel to shut down the transfer.

The supply vessel is not boomed during transfers because stationary booming adjacent to the platforms is infeasible due to the swift currents in Cook Inlet. Diesel fuel, which is non-persistent, is the only product transferred from the supply vessel to storage tanks on the platforms.

Tank cleaning operations are not conducted during diesel transfers.

All personnel involved in the transfer are in radio or voice communication so that each person can clearly communicate orders to stop a transfer at any time during the transfer.

The transfer can be immediately stopped by shutting off the pump on the supply vessel.

Before the transfer begins, all valves in the transfer system are checked to make sure that they are in the correct positions, and all manifolds not in use are blind-flanged or capped.

The standby generator is started and kept running during all fuel transfers on Platform A or C (which ever platform is not conducting fuel transfer operations) to maintain full fire fighting capability in case of an emergency.

2.1.6 Operating Requirements for Exploration and Production Facilities

Flow Tests: Oil produced during a formation flow test, or other drilling operation, is collected and stored in a manner that prevents the oil from entering state land or waters. All produced fluids are processed through the platform production handling systems and sent to the Onshore Facility for final treatment. No oil is allowed to enter State land or waters.

Integrity Inspections: The requirements for fatigue and structural integrity inspection on new platforms do not apply to XTO's existing platforms, because Platforms A and C were installed in 1965. Even though XTO is not required by regulation to inspect the platform structure, XTO does have a platform integrity-testing program.

Isolation Valves: Pipeline shut-in and isolation valves are located in protected locations on the lower decks of the platforms, beneath the well bays. Pipeline shut-in valves close automatically in the event of an emergency shutdown. In addition, isolation valves, in line with the shut-in valves, can be operated manually as backup.

Drip Pans and Curbing: Both platforms have containment drip pans and curb systems. Oil drainage and collection equipment is used to catch small oil leakage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, etc. Drains direct all oil to a central sump. Oil collection equipment is located where ever drains and sumps are not practical and is emptied as often as necessary to prevent overflow.

To guard against oil spills going overboard, all outside rooms on each deck have barriers installed across outside doorways to prevent loss of oil through outside grating. Each platform is manned 24 hours per day by operations and maintenance personnel. All personnel are trained to stop any oil spill at the source and to clean up all oil accumulations. Oil leaks around compressor bases, generators and AC engines are contained by metal barriers surrounding the machines. Oil accumulations in the metal barriers are removed on a routine basis. Oily water is dumped into the drain system, which is then pumped out of the sumps into the flotation cell. Oil skimmed off in the flotation cell is pumped back into the crude oil system.

Catch Tanks: Both platforms have impermeable decks and catch tanks as a part of the deck drain system. High-liquid alarms notify the operators if high liquid levels develop.

The flotation cell system on Platform A and Platform C consist of a surge tank with two pumps, an effluent tank with two pumps, and a sludge tank with two pumps. All tanks have high-low level controls. Pumps are used to transfer oil to the platform sludge tank. Oil is pumped from the sludge tanks to the on-deck tank and then to the Onshore Facility for final treatment.

Flotation cell inspection procedures are conducted on a daily, weekly, and monthly basis. Daily inspections include a check of the oil pump level and packing, and a visual inspection of system operation. Inspections are performed as needed to include; cleaning the effluent tank, draining the surge tank, greasing the pillow block bearings on the flotation tank rotating arms, checking the oil level in the gear case on the flotation rake, and electric motor maintenance.

On Platform A, the floor drain systems drain to the sump tank located beneath the lower deck or to the drain water surge tank located on the lower deck. Three lower-deck sumps (in Bays 2, 3 and 4) contain sump pumps operated on a level control to pump the fluids to the flotation cell surge tank, where the oil is skimmed off and returned to the crude oil system. A (b) (7)(F)

Fluid is pumped from the sump tank to the on-deck tank.

On Platform C, the top and middle deck drain systems drain to the flotation cell, where oil is skimmed off and returned to the crude oil system. A (b) (7)(F)

Lower deck rooms that do not contain oil have drains, which can be opened overboard, and do not go to the flotation cell.

On both platforms, a screen is installed at the suction of each pump to keep debris from plugging the pump. A spare pump is available to prevent oil from overflowing the drain if the sump pump fails. Following removal of the failed pump, the backup spare pump would be installed and the system returned to automatic operation.

Information pertaining to oil storage tanks and facility oil piping is found later in Part 2 and Part 3 of this ODCP.

2.1.7 Platform Well Control and Emergency Shutdown

2.1.7.1 Production

(b) (7)(F)

In compliance with 20 AAC 25.265, SSVs are installed at the wing valve flange connection of each producing well. These valves close automatically when safety air or instrument air pressure is lost. All of the production wells are equipped with SCSSSVs (installed below the mud line) automatic closures controlled by the loss of safety air or instrument air pressure. Most MGS wells cannot flow to surface

without the assistance of gas lift or hydraulic lift. In an emergency, gas lift and hydraulic lift systems would automatically be shut-down; therefore, these wells would not pose an oil spill risk.

A few MGS wells have the ability to flow to surface without the assistance of gas lift or hydraulic lift; however, the unassisted oil flow rate is very low and quickly declines to a no-flow condition due to low reservoir pressure. XTO engineers estimate the highest producing well may have the ability to initially unload about 70 barrels of oil out of its tubing, and then only flow a maximum of 5 bopd unassisted thereafter. The lack of gas production and low wellhead pressure will ensure rapid well control.

Oil well casing and tubing systems are located inside the platform legs. A building structure is located over the wellheads. Any oil released in the wellhead building would be completely contained. Any oil discharged would be collected in the lined floor area, and would be transferred by sump pump to the sludge tanks. Oil and water collected from the sludge tanks would be pumped to an on deck tank and then into the pipeline to be sent to the Onshore facility for treatment. Therefore, in the very unlikely event of a well control problem at one of XTO's low flow rate wells, the oil released would be completely contained and routed to the existing oil and water collection system, protecting the environment and ensuring personnel safety.

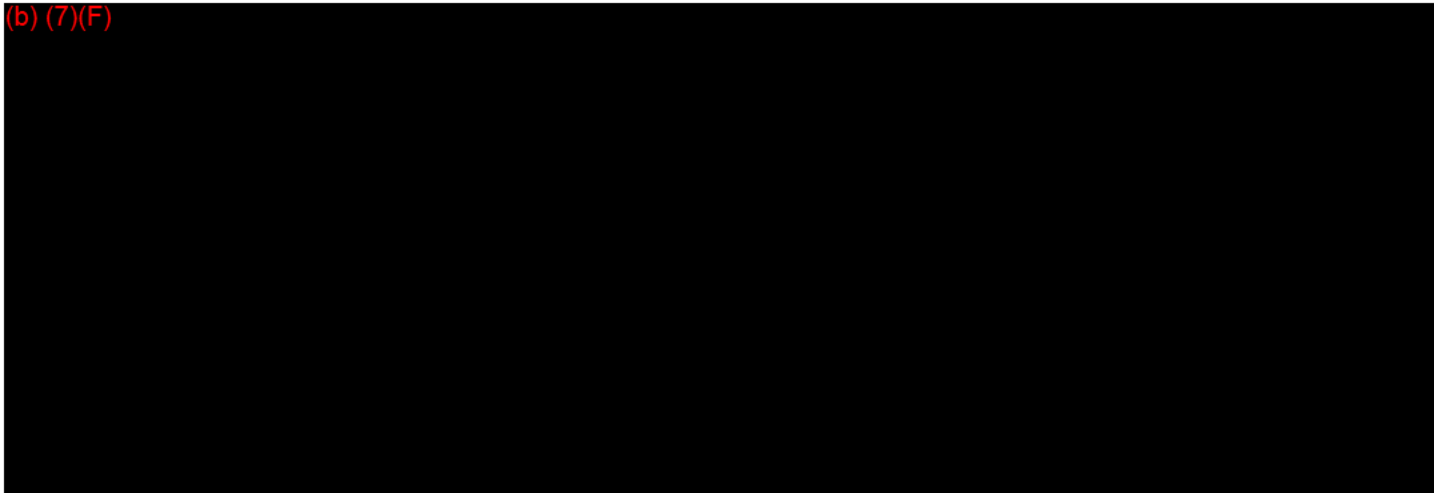
Fire, pressure, level sensors, and gas detectors are installed in each wellhead room to detect a release of hydrocarbons. If a production well flowline fails and releases hydrocarbons, an audible gas alarm will sound and an indicator light on the main gas panel will signal the location of the activated detector.

In such an event, both the on-duty and off-duty production operators are instructed to:

- Immediately don a 30-minute air pack;
- Report to the main gas panel to identify the source of the leak via the location indicator; and
- Investigate the source of the gas at the indicated location.

For wells with SCSSSVs, the production operator will manually shut in the source of the leak if safe to do so, or will activate the "quick bleed" manual discharge of the safety air pressure to shut in all SSVs and

(b) (7)(F)



2.1.7.2 Drilling or Workover

Blowout prevention equipment (BOPE) and well control systems are installed before drilling below a casing string and as required during workover operations. The BOPE is capable of controlling the maximum expected wellhead pressure. Casing and BOPE installations conform to Alaska Oil and Gas Conservation Commission (AOGCC) regulations (20 AAC 25.035 and 25.285). Drilling mud is the

primary means of controlling downhole pressure. The mud composition and weight is monitored 24 hours per day.

If the ESD system does not control the well, materials to mix the required-density kill fluid would be immediately mobilized from local vendors and mixed in the platform mud pits. A kill manifold and lines would be rigged up to the wellhead valves, and kill fluids would be pumped down the well bore to stop the fluid flow and control pressures. Additional response measures would follow the well control scenario described in Section 1.6.

Written instructions describing duties and obligations to prevent pollution are prepared for contractors servicing a well or systems appurtenant to a well or pressure vessel. An authorized XTO representative is present at all times to intervene when necessary to prevent a spill during drilling or workover.

2.1.8 General Inspection Procedures

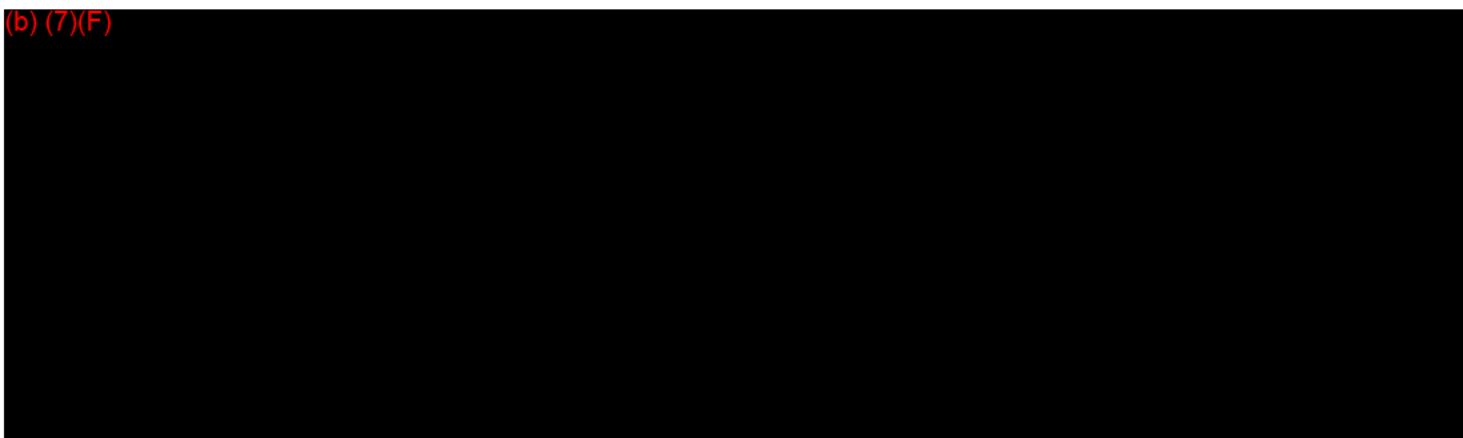
Production personnel man the platforms 24 hours per day. During routine tours of each deck, operators visually inspect all tankage, sumps and drains for indications of oil leaks. As part of the operator's daily routine, piping, valves, glands, wellheads, pumps and all other production machinery is visually inspected. The operator notes any oil leaks or spills. The source of the spill is located and corrected, and the oil spill is cleaned-up, usually by mopping and/or washing down with water. Oily water collected in the drainage system and is pumped to the flotation cell. To be certain no oil escapes overboard, steel barriers are placed across outside doorways and are visually inspected daily.

A prime responsibility of the production operator during the daily surveillance routine at the Onshore Facility is to visually examine the above-ground valves and flowlines of the surge tanks, the heater treaters, the direct-fired heaters, the lease automatic custody transfer (LACT) pumps, the pig trap building, the flow splitter and the water treatment facility. In an effort to prevent leaks from developing, special attention is given to valves and pumps. A continuous operator maintenance program to change out and/or tighten leaking packings on valves and pumps in the water treatment facility is in effect to help prevent spills from occurring.

Daily inspection of secondary containment areas at the platforms and the Onshore Facility are documented on each facility's daily report. Reports are maintained for at least five years.

2.1.9 Platform Spill Prevention Systems

(b) (7)(F)



The on-deck tanks are protected by a vent line. The vent line runs into a scrubber. The scrubber is protected by a relief valve and a rupture disc. In addition, the direct line to the flare has a mist extractor downstream of the scrubber to provide additional protection against oil carryover to the flare.

2.1.10 Leak Detection, Monitoring and Operating Requirements for Flowline Surveillance

Surveillance of the two marine flowlines is accomplished by helicopter reconnaissance of the pipeline routes and by visual observations from the platforms and from underwater diver, and side scan sonar, a leak detection system installed on the flowlines and pressure testing. XTO flowline leak detection, monitoring and operating requirements are well documented in its DOT Integrity Management Program (reference Section 2.1.13). XTO has a corrosion monitoring and control program for flowline piping that is consistent with Chapter VIII of Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids (ASME B31.4-2002).

A pressure, temperature and flowrate compensated pipeline leak detection system is installed on the oil flowlines. This system was upgraded in 2007. The system was designed by PDL Environmental from Houston Texas. The leak detection system compares volumes into the pipeline from the platforms with the volumes out of the pipelines at the Onshore Facility. The system is monitored 24 hours per day by operator and alarms are sounded when a leak is detected.

Leaks are detected using pressure and temperature sensors located at the platforms and at the Onshore Facility, in combination with a coriolis meter at each platform and a wedge meter at the Onshore Facility. The communication uses a combination of cable, telephone, and microwave links; and the main computer is located at the MGS Onshore Facility. Alarms are activated by flow differences, pressure or temperature changes. The detection alarms are set to sound if there is a shortage of 15 barrels of fluid in one hour. When an alarm occurs, the operator evaluates the alarm to determine the type of response needed. A record of the incident is created and maintained on file at the Onshore Facility.

XTO maintains corrosion coupons and conducts frequent pigging of the flowline, in an effort to monitor and reduce internal corrosion.

Side-scan sonar inspections are conducted annually to inspect for flowline movement and seabed shifts. Whenever clearances between the flowline and seabed are found to be excessive, the line is stabilized with sandbags. Survey records are maintained.

2.1.11 Oil Storage Tanks

Table 2.1-2 provides a list of onshore and offshore MGS storage tanks. The tank maintenance and inspection program was developed based on the definition of oil storage tank contained in 18 AAC 75.990(37): "all containers, including storage and surge tanks, used to store bulk quantities of oil which have a capacity greater than 10,000 gallons [238.1 bbl], but does not include process pressure vessels or underground storage tanks."

Onshore Facility Surge Tanks 1-3: Onshore Facility Surge Tanks 1-3 follow inspection procedures set out in the American Petroleum Institute (API) Recommended Practice (RP) 12D. XTO hires third party contractors to complete all internal and external inspections for the Onshore Facility tanks. Table 2.1-2 lists the required inspection schedule. The certified inspector establishes the inspection interval based on the condition of the tank. Inspector's certificates of qualifications are included in the inspection reports and records. As part of the external inspection for onshore tanks, a licensed land surveyor performs settlement surveys. XTO staff conducts external tank condition examinations monthly. Inspection reports, including recommendations and records of leaks or operational alerts, are retained for the life of the tanks.

Onshore Facility Sump Tanks: Two sump tanks were installed in 2002. These tanks will follow the American Petroleum Institute Standard No. 653 (API 653) inspection standard for new, welded tanks. XTO hires third party contractors to complete all internal and external inspections for the Onshore Facility tanks. Table 2.1-2 lists the required inspection schedule. The certified inspector establishes the inspection interval based on the condition of the tank. Inspector's certificates of qualifications are included in the inspection reports and records. As part of the external inspection for onshore tanks, a licensed land surveyor performs settlement surveys. XTO staff conducts external tank condition examinations

monthly. Inspection reports, including recommendations and records of leaks or operational alerts, are retained for the life of the tanks.

XTO will notify ADEC in the event of a major repair or alteration as described in API Standard 653.

Offshore Platform Containers: Offshore platform container inspections are completed by third party certified contractors. External ultrasonic inspections are performed on the platform girder tanks and on-deck tanks. Table 2.1-2 lists the required inspection schedule. The certified inspector establishes the inspection interval based on the condition of the tank. Inspector's certificates of qualifications are included in the inspection reports and records. Inspection reports, including recommendations and records of leaks or operational alerts, are retained for the life of the tanks.

Table 2.1-2 Middle Ground Shoal Oil Storage Tank Inspection Schedule

Tank	Type of Tank	Contents	(b) (7)(F)	Construction Date	Last External Inspection Completed	Next External Inspection Due	Last Internal Inspection Completed	Next Internal Inspection Due
Onshore Facility								
Tank 1	Surge Tank	Crude		2012	New	2017	New	2022
Tank 2	Surge Tank	Crude Oil/Water Mixture		2012	New	2017	New	2022
Tank 3	Surge Tank	Crude Oil/Water Mixture		2012	New	2017	New	2022
(2) Sump Tanks	Sump Tanks	Crude Oil/Water Mixture		2002	2013	2018	2013	2018**
Platform A					Last External Ultrasound	Next External Ultrasound		
On-Deck Tank (Shipping Tank)	Surge	Crude Oil/Water Mixture		1968	2007	2017		
2-3 Girder	Storage	Diesel		1964	2007	2017		
3-4 Girder	Storage	Empty		1964	O.O.S.	O.O.S.	O.O.S.	O.O.S.
1-2 Girder	Storage	Empty		1964	O.O.S.	O.O.S.	O.O.S.	O.O.S.
1-4 Girder	Storage	Empty		1964	O.O.S.	O.O.S.	O.O.S.	O.O.S.
Platform C								
Shipping Tank	Surge	Crude Oil/Water Mixture		1967	2007	2017		
Shipping Tank	Surge	Crude Oil/Water Mixture		1967	2007	2017		
3-4 Girder	Storage	Diesel		1967	2007	2017		
1-2 Girder	Storage	Empty		1967	O.O.S.	O.O.S.	O.O.S.	O.O.S.
2-3 Girder	Storage	Empty		1967	O.O.S.	O.O.S.	O.O.S.	O.O.S.
1-4 Girder	Storage	Empty		1967	O.O.S.	O.O.S.	O.O.S.	O.O.S.

*O.O.S. = Out Of Service

** Sump Tanks Internal inspection frequency changed from 10 years to 5 years.

2.1.11.1 Leak Detection/Prevention

Existing installations must be equipped with a leak detection system that an observer from outside the tank can use to detect leaks in the bottom of the tank, cathodic protection, a thick film liner, or another leak detection or spill prevention system approved by ADEC.

Onshore Surge Tanks and Sump Tanks: Leak prevention for the onshore tanks is accomplished by secondary containment on each of these tanks, as described in Section 2.2.12(a).

The onshore surge tanks are constructed upon conical concrete slabs, sloped from a high point in the tank center to the tank edges. Each tank's leak detection system consists of radial grooves cut into the concrete slab surface spaced at 45-degrees. Any product that may leak from the tank bottom will be directed along these grooves to the perimeter of the tank where it would be readily observed during routine facility inspections [18 AAC 75.065(j)(4)].

This design also serves to provide for a low corrosivity environment. Construction of the tanks upon the sloped concrete slab isolates the tank bottom from contact with soil and prevents moisture from seeping or accumulating between the tank floor and the concrete. Tank foundations are also elevated a minimum of 12-inches above the dike floor to prevent standing water from encroaching under the tanks.

A third party Corrosion Control Engineer and NACE Cathodic Protection Specialist evaluated the tank bottom design of XTO's surge tanks. The corrosion evaluation resulted in a determination that the installation of a cathodic protection system was not necessary due to the low corrosivity environment and the measures used to prevent exposure of the tank bottom to moisture.

The elevated sump tanks allow for visual detection of leaks. The Onshore Operator is responsible for daily visual inspection of the tanks and documented monthly inspections. The (2) 1000 bbl sump tanks are protected with an external polyuria coating. The sump tanks are coated internally with epoxy-based paint. These non-pressure vessels are inspected internally for corrosion every 5 years.

Platform A On-Deck Tank: This tank is located on an impermeable deck with catchments systems and leak detection sumps.

Platform A and C Girders and Platform C Shipping Tanks: These tanks are elevated. An observer from outside each tank can visually detect leaks in the bottom of the tank.

2.1.11.2 Overfill Prevention

Onshore Surge Tanks: The tanks are equipped with level transmitters that have high level and high level alarms with visual indication in the control room, and audible indication at the facility. The tanks are also equipped with overflow connections to the adjacent tanks.

Onshore Sump Tanks: The tanks are equipped with mechanical float-type switches with a high-level audible alarm and remote level indicators. The tanks can also be gauged. (The level indicators are accurate to within several inches.)

Offshore Girders: Levels are monitored by level indicators and the volumes transferred are metered. The girder tanks are equipped with high-level alarms. Each transfer involves a predetermined volume.

Offshore Shipping Tanks and On-Deck Tank: The tanks are equipped with high-level alarms, level indicators, and level control pumps. The tanks are also closely monitored during the operator's rounds.

2.1.11.3 Testing of Overfill Prevention Devices

Overfill prevention devices for all facilities are tested monthly.

2.1.12 Secondary Containment Areas for Oil Storage Tanks

Onshore Tanks: Secondary containment for onshore tanks must be able to hold the volume of the largest tank plus local precipitation; it must be resistant to damage from the product and from weather; “sufficiently impermeable”, and it must be checked daily. “Sufficiently impermeable” for secondary containment means that “the design and construction of the system is such that it has the impermeability necessary to protect groundwater from contamination and to contain a discharge until it can be detected and cleaned up” [18 AAC 75.990(64)].

Onshore Surge Tanks: (b) (7)(F) tanks sit within a secondary containment system with a (b) (7)(F), sufficient capacity to hold 110% of largest tank volume (providing for 100% of the largest tank, plus enough additional capacity to allow for local precipitation). This containment area is comprised of an impermeable geo-membrane liner, which is anchored and sealed to the concrete dike wall and each of the tank ring walls (Figure 2.1-1). To ensure the integrity of the containment liner during operations, the geo-membrane liner is protected by geo-fabric overlain with gravel. The operators monitor the diked area several times each day. If a discharge were to occur, its early detection and subsequent cleanup would prevent groundwater contamination.

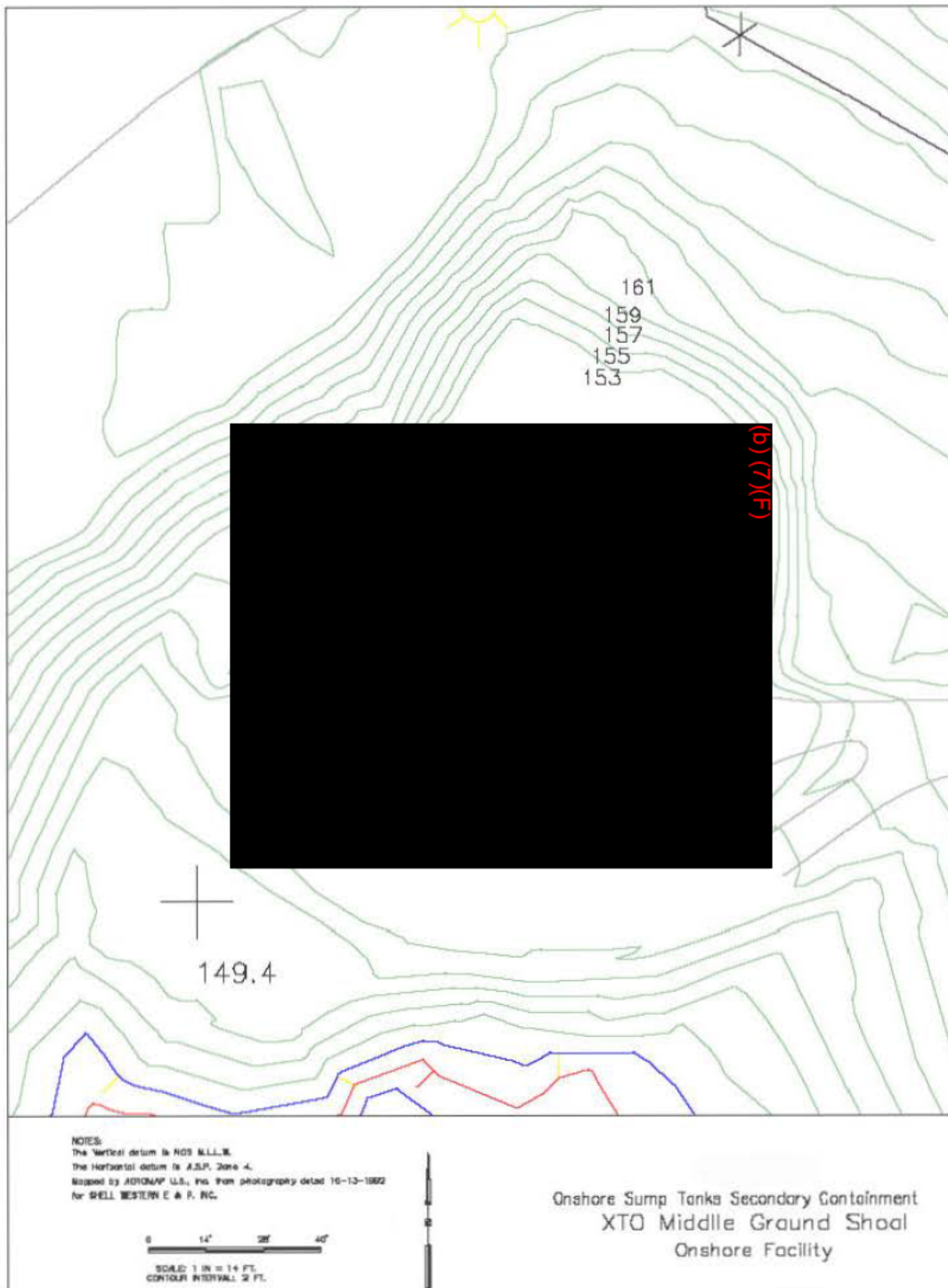
Onshore Sump Tanks: The two (b) (7)(F) sump tanks are enclosed by an earthen berm with a capacity of approximately (b) (7)(F) 2.1-2). The berm is constructed of imported non-frost-susceptible gravels with sand and varying amounts of organics. A continuous layer of Geotech liner bonded with a 60 mil layer of Polyurea is placed on the entire inside surface of the dike area as well as sealed to any surfaces on the inside to prevent migration of any fluids to the outside of the impermeable containment barrier. The operators monitor the diked area several times each day. Any discharge from the tanks can be quickly detected and cleaned up prior to contamination of groundwater.

Offshore Platforms: Oil storage tank areas on offshore production platforms must incorporate a secondary containment method, in locations where feasible.

Platform A and C Girders: Secondary containment for the girders is not feasible because of their size and location. The bottoms are exposed such that any leaks would be quickly detected [see Section 2.1.11(h)]. Because the girders are structural members of the platforms, they have significantly higher wall thicknesses than required for liquid containment. Since the tanks are used for diesel storage, internal corrosion damage is not expected. The gauging systems and visual inspection programs provide adequate spill prevention.

Platform A On-Deck Tank: The tank is located on an impermeable deck with catchment systems and leak detection sumps.

Platform C Shipping Tanks: Secondary containment is not feasible because of their location. The tanks are an integral part of the platform. The tank bottom is exposed such that any leaks would be quickly detected.

Figure 2.1-2 Onshore Sump Tanks Secondary Containment

Debris Removal: The secondary containment system must be maintained free of debris, including excessive accumulated rainwater. The diked areas at the Onshore Facility are maintained free of debris.

Drainage: This section describes the requirements for drainage valves for water accumulation from secondary containment areas directly to the land or waters of the state. The surge tank diked area at the Onshore Facility has drainage valves that are closed and locked when unsupervised. Any accumulated rainwater is inspected for sheens and then drained out if no sheen is present. The date and quantity of water drained is recorded. If there were a sheen, the water would be treated in a separator to reduce the oil level to 15 parts per million (ppm) before discharge. The sump tank diked area does not have drain valves and is pumped out to the surrounding area. The water quality is also monitored and the quantity pumped is recorded.

Inspections: XTO personnel visually inspect Onshore Facility secondary containment areas for the presence of oil leaks or spills. Unless precluded by safety concerns or weather conditions, XTO personnel conducted documented weekly inspections of secondary containment areas including checks 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.

Monitoring Wells: XTO has two monitoring wells.

2.1.13 Pipeline Integrity Management Program

Flow lines at Production Facilities (18 AAC 75.047)

Flow lines “B”, and “C” are used to transport oil and water from Platforms A and C to the onshore facilities. Flowline “A” (A-Line) begins at Platform A and ends as a pig receiver located at the Onshore Facility. The A-Line segment is approximately 7 miles long. The A line is used to transport gas to the platforms. Flowline “B” (B-Line) begins at Platform A and ends as a pig receiver located at the Onshore Facility. The B-Line segment is approximately 7 miles long and runs parallel to A-Line. Flowline “C” (C-Line) begins at Platform C and ends at a subsea connection with the B-Line, adjacent to Platform A. The C-Line segment is approximately 2.3 miles long. The MGS Offshore Piping Schematic is found in Figure 2.1-1. All three pipelines are inspected, maintained, and repaired to meet the Department of Transportation (DOT)’s regulations at 49 CFR 195, governing transportation of hazardous liquids by pipeline in high consequence areas. Historically all three pipelines have transported liquid hydrocarbons and XTO plans to continue to inspect, maintain and repair these three pipelines to hydrocarbon standards to allow all three pipeline to be used to transport oil from the platforms to shore. In June 2005, the A-Line was converted to gas service, to bring fuel gas from onshore to Platforms A and C. Oil is transported from Platform C via the C-Line that connects into the B-Line at Platform A and continues to the Onshore Facility. If necessary, the A-Line can be returned to liquid hydrocarbon service.

The Flowlines A, B, and C are API 5L, Gr. B seamless, 8.625” in diameter (O.D.) pipe. The exterior coating is a coal tar enamel and X-Tru Coat polyethylene, with a 1-2-1/2” concrete weighted exterior coating. The flowlines were designed to the American Society of Mechanical Engineers (ASME/ANSI 31.4) for Liquid Transportation Systems for Hydrocarbons and Liquid Petroleum Gas, and the API 1104 standard. The fitting and valve rating is 1480 psig (ANSI 600). The maximum operating pressure is rated to 620 psig (135 SMYS). The normal operating pressure ranges 160-280 psig. These pipelines were originally over-designed for normal service. The pipe wall thickness is several times heavier than required for the pressure rating.

DOT regulations at 49 CFR 195, governing transportation of hazardous liquids by pipeline in high consequence areas. XTO has developed a DOT Integrity Management Plan. The Integrity Management Plan is several hundred pages long, and is on file at XTO’s offices.

This plan includes important pipeline integrity management activities such as:

- daily operator observations and monitoring;
- computer-based pipeline surveillance system with manned alarms;
- block valve operation testing;
- pressure relief valve testing;
- cathodic protection monitoring;
- side scan sonar surveys to identify unsupported pipeline spans;
- cathodic protection surveys to determine the near shore cathodic protection levels;
- close interval potential surveys to determine the full length protection levels;
- pressure testing to demonstrate pipeline integrity;
- corrosion coupon data collection to monitor corrosion rate levels;
- platform diver inspections;
- nearshore (ice scour zone) diver inspections, including photographs and wall thickness readings; and
- wall thickness readings, taken whenever pipe is exposed.

Pipelines A, B, and C are offshore pipelines. These pipelines are buried or sub-sea. The pipelines operate at low pressure conditions which minimizes pipeline stress and minimizes the threat of brittle failure. Unsupported spans greater than 50 feet are supported with sandbag support piles, and pipeline crosses and sub-sea objects are sandbagged to avoid pipe abrasion. The pipelines are protected with external coating and impressed current cathodic protection. Metal beach covers were installed over the pipelines in potential exposure areas to better retain the soil blanket and protect from pipeline exposure due to beach tidal erosion.

Pipeline B is pigged daily. Pipeline C is pigged every other day. Corrosion and scale inhibitors are also injected to protect these lines. Pipeline A is currently (2007) in fuel gas service. The flowline leak detection system is described in Section 2.1.10. XTO maintains a record of its flowline corrosion control inspection, maintenance and repair records.

XTO will notify ADEC if its flowlines are removed from service for more than one year, and will ensure that the lines are free of hydrocarbons and are isolated from the system.

Figure 2.1-5 Offshore Pipeline Schematic

(b) (7)(F)



Facility Oil Piping Requirements (18 AAC 75.080)

Facility piping includes piping on Platform A and Platform C, and piping at the Onshore Facility. The MGS Onshore Piping Schematic is found in Figure 2.1.6. All onshore piping has been moved above ground and either placed on vertical support members or in covered utilidors to enhance inspection, maintenance and repair. There is only one section of buried pipeline remaining (extending from the beach to the 1st stage of the processing system (heat exchanger). The pipeline leaving the facility (downstream of the LACT meter) is owned and operated by Tesoro, and is part of the "Kenai Pipeline System." Aboveground facility oil piping is supported consistent with applicable requirements of ASME B31.3 – 2004.

Platform Piping: Piping was designed to American Society of Mechanical Engineers (ASME/ANSI 31.4) for Liquid Transportation Systems for Hydrocarbons. All oil piping on the platforms is painted for external corrosion protection. An impressed current cathodic protection system is installed.

Onshore Piping: Piping was designed to American Society of Mechanical Engineers (ASME/ANSI 31.4) for Liquid Transportation Systems for Hydrocarbons. An impressed current cathodic protection system is installed.

A corrosion monitoring and control program is in place for facility piping. Buried steel piping containing oil will be inspected and maintained in accordance with the appropriate standards including API 570, National Association of Corrosion Engineers (NACE) RP0169; and ASME/ANSI B31.4, as appropriate. API 570 inspections are completed at regular intervals for above ground piping, based on the findings of the last inspection and the certified inspector's recommendation for the timing of the next inspection. API 570 inspection is completed on buried lines when exposed.

Corrosion surveys include monthly pipe rectifier checks, annual pipe-to-soil potential surveys, and close-interval potential surveys. Additional examination (e.g., ultrasonic and/or radiography testing for internal damage) is completed and corrective action is done to repair damaged pipe and to control future corrosion if corrosion damage is found.

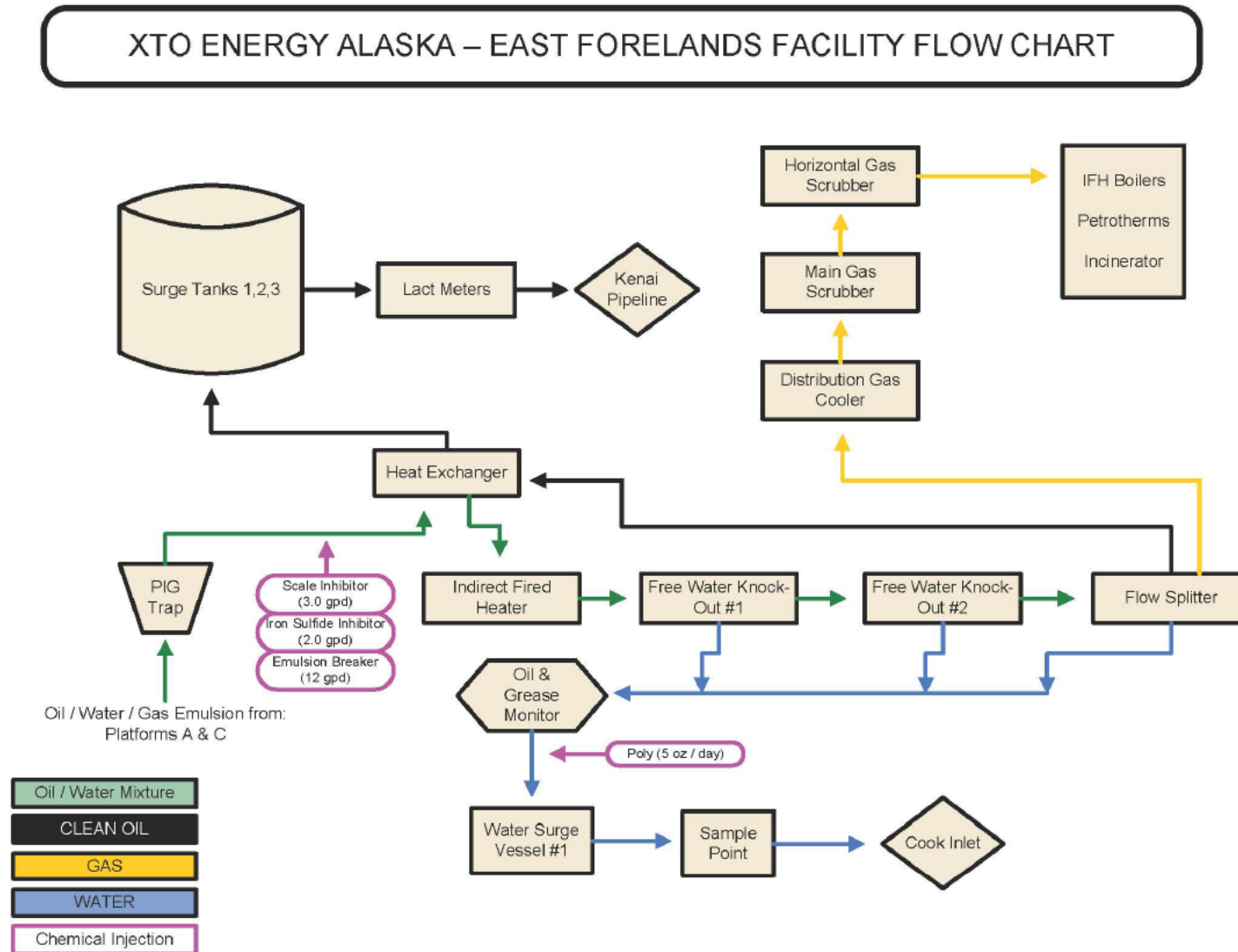
State regulations require aboveground facility piping to be protected from atmospheric corrosion by protective coating or use of corrosion resistant material. XTO's Onshore Facility above ground piping meets this standard.

In 1994, selected sections of buried piping were excavated and inspected for the program. Corrosion coupons are installed at appropriate locations in the piping systems and are monitored on a quarterly basis. From the 1994 inspections, external corrosion damage was determined to be insignificant. However, anodes were installed for further protection to those sections excavated. In 2001, an impressed current system was installed to replace the sacrificial anodes. Figure 2.1-7 is a drawing of the impressed current system, which provides protection levels that are consistent with NACE and API guidelines for external corrosion.

XTO does not have any above ground or buried piping to or from docks or vessels.

XTO will ensure piping removed from service for more than one year is properly abandoned.

Figure 2.1-6 On Shore Facility Flow Diagram



(b) (7)(F)

Emergency Plan

September 2011
Rev. 0

Above ground facility piping and valves are visually checked for leaks or damage during routine operations, and are protected from damage by vehicles.

Protection from Vehicles: All piping at the Onshore Facility is protected either by enclosed utilidors or by guards installed specifically for protection from vehicles. In addition, XTO company policy prohibits motor vehicles from being closer than 10 feet from production facilities and equipment.

Piping Supports: The piping supports are typically simple, rigid structures, three feet or less above grade. They have proven to be seismically stable over the life of the Onshore Facility.

2.2 Discharge History (>55 GAL)

Table 2.2-1 contains a history of spills greater than 55 gallons at MGS facilities. This history was compiled using records of all known spills reported to ADEC. Records are not available for any spills that occurred prior to 1982. The table shows that spills are extremely rare on Platforms A and C. Several spills from corroded lines have occurred at the Onshore Facility, but all affected only soils in the immediate vicinity of the leak. XTO has instituted a corrosion control program to prevent future spills at the Onshore Facility as discussed in Section 2.2.13(f).

In an analysis of the spill history at XTO indicates the following relationships exist between spill events:

- Failure of valves and/or high level alarms;
- Corrosion of piping and tubing;
- Failure or malfunction of equipment; and
- Human error.

Overflow caused by improper valve maintenance, and the malfunction of high-level alarms resulted in some of the largest spills at XTO. Accordingly, XTO has improved overfill prevention and leak detection programs as described in Section 2.2.11(h). Spills in the pipe utilidor at the Onshore Facility are commonly caused by corrosion. These have generally ranged in size from 55 to just over 1,000 gallons. To prevent future spills in the utilidor, XTO implemented a corrosion control program as described in Section 2.2.13(f). Finally, XTO modified its preventative maintenance and spill prevention programs to reduce human error.

Table 2.2-1 Middle Ground Shoal Spill History*

Date	Product	Amount (gal)	Location	Cause	Actions To Prevent Recurrence
12/8/88	Crude oil	84,000	Onshore sump tank	Overflow due to open relief valve and failed tank high-level alarm	Separated pipeline relief valve from the drain system and redirected to stock tank; repaired alarm; heat-traced and insulated sump tank pump discharge lines
5/22/89	Motor oil	210	Platform C J tube	Manifold valve left open during fuel transfer	Valves on the manifold have been chained and locked shut and will only be opened by the XTO person-in-charge
6/19/90	Ethylene glycol/ water	55/55	Pipeway utilidor at Facility	External corrosion of pipe	Corrosion control program and maintenance

Table 2.2-1 Middle Ground Shoal Spill History*

Date	Product	Amount (gal)	Location	Cause	Actions To Prevent Recurrence
6/26/91	Crude oil/water	126/126	Onshore tank secondary containment berm	Probable corrosion of pipe	Corrosion control program and maintenance
7/2/91	Crude oil/water	756/504	Distribution building at Onshore	Broken tubing line (corrosion)	Corrosion control program and maintenance
9/10/92	Crude oil/water	20/200	Pipeway utilidor at Onshore	Internal corrosion of piping	Corrosion control program and maintenance
10/29/92	Crude oil/water	189/105	Pipeway utilidor at Onshore	Internal corrosion	Corrosion control program and maintenance
4/18/93	Crude oil	126	Surge tank secondary containment at Onshore	Micro-switch controller on #1 heater treater malfunctioned	Controller repaired and operations check added to preventive maintenance program
5/7/93	Ethylene Glycol	84	Indirect Fired Heater (IFH) building at Onshore	#1 IFH explosion	#1 IFH repaired. Startup procedures modified to prevent condensate buildup
1/19/95	Crude oil	2,436	Surge tank secondary containment at Onshore	Overflow; high level alarm not working and overflow valve closed	Replaced valves and rebuilt tank; overflow valves now kept open
5/17/98	Crude oil	132	Sump tank secondary containment at Onshore	Overflow; high level alarm not working	Found alarm system had bad fuse contacts, Replaced contacts and fuse
5/17/98	Crude oil	880	Utilidor	Dresser sleeve coupling failed	Replaced dresser sleeve and nearby associated piping. Continue to monitor pipeways for leaks
3/14/00	Crude Oil	220	Oil Separator Bldg.	Unexpected valve opening during piping changeout	Installed new isolation valve
1/9/2012	Crude oil and process water	6300	Onshore Facility, Tank #3	Seal failure	Old riveted surge tanks replaced by new welded tanks.

*Discharges greater than 55 gallons reported to ADEC. Records are not available for any spills that occurred prior to 1982. XTO Energy has had zero spills greater than 55 gallons since 2000.

2.3 Potential Discharge Analysis

Table 2.3-1 contains an analysis of potential discharges for MGS facilities.

Table 2.3-1 Analysis of Potential Discharges

Type	Cause	Product	Size	Duration	Actions Taken to Prevent Potential Discharge
PLATFORMS A AND C PRODUCTION SYSTEM					
Flare boom carryover	Overpressure or loss of well control during workover	Crude and water and/or drilling mud	Max 31 bbl for overpressure; 15 bbl for loss of well control 10.8 bbl water and 20.2 bbl oil	2.1 bbl/min for up to 15 min. for overpressure; 0.5 bbl/min for up to 30 min for loss of well control	High-pressure emergency shutdown system (ESD) Well control: monitoring during well work, blowout preventer (BOP) tests, automatic and manual BOP valves, training, mud system design, mud pit volume monitoring
Sump overfill	Pump failure, line failure or vessel failure	Crude or petroleum product	Max 31 bbl 10.8 bbl water and 20.2 bbl oil	2.1 bbl/min for up to 15 min.	Secondary pump starts on first high level Sump has high-level alarm
Deck containment leak	Line or vessel failure	Crude and water	Max 31 bbl 10.8 bbl water and 20.2 bbl oil	2.1 bbl/min for up to 15 min.	Inspections Mechanical integrity testing
Deck failure	Line or vessel failure	Crude and water	Max 31 bbl 10.8 bbl water and 20.2 bbl oil	2.1 bbl/min for up to 15 min.	Inspections Maintenance
Girder failure	Ship collision	Diesel	Max 2,850 bbl	Sudden	U.S. Coast Guard navigation lights Platforms are painted yellow Platform locations indicated on navigational charts
PLATFORMS A AND C TRANSFER					
Diesel transfer from supply vessel	Failure of transfer hose or piping	Diesel	1 to 12 bbl	1 min.	Annual hose and piping inspection/testing U.S. Coast Guard approved marine transfer operations manual
Transfer of packaged products from vessel	Lift system failure; human error	Various	1 to 12 drums	Sudden	Annual inspections Training Use of qualified personnel only

Table 2.3-1 Analysis of Potential Discharges (Continued)

Type	Cause	Product	Size	Duration	Actions Taken to Prevent Potential Discharge
ONSHORE FACILITY					
Surge tanks or sump tank	Tank failure from overfilling, overpressure, or earthquake	Crude	(b) (7)(F)	Sudden	Tank level indicators High-level alarms Visual inspection API inspection Maintain minimum levels in tanks
Major piping spill	Corrosion, mechanical damage, or earthquake	Crude and water		Max. 12 hr.	Visual inspection Gas alarms in enclosed areas Equipment failure alarms
Piping leak	Corrosion, mechanical damage, or earthquake	Crude		Max. 12 hr.	Visual inspection Gas alarms in enclosed areas Equipment failure alarms
Heliport	Transfer hose failure or earthquake	Jet fuel		Sudden	Federal Aviation Administration regulations for refueling

2.4 Operational Conditions Increasing Risk of a Spill

2.4.1 Platforms and Onshore Facility

No operational conditions have been identified which would increase the risk of a spill from the MGS facilities. Conditions of concern in the Cook Inlet are earthquakes, floe ice, tsunamis, and high currents. The Cook Inlet platforms, including Platform A, were considered "fit for purpose" in a CIRCAC sponsored industry study conducted in 1993. The basic design factors are discussed below.

The platforms are designed for earthquake loading. The original platform design was based on the uniform building code guideline in use on the West Coast at the time (0.15G). The current API guidelines place the Cook Inlet area in seismic zone 4 (i.e., 200-year earthquake design loading of a new platform is 0.25G). Platform A and C jackets and topsides were studied in contrast with the new guidelines. Both platforms' jacket and pile foundations met the requirements without need of modification, however, the topsides required strengthening. This work was completed in 1993 (Platform A) and in 1997 (Platform C). Equipment bracing was completed in 1998 (Platform A) and 1999 (Platform C). The platforms are now regarded as requalified for seismic loads and fit for purpose.

The platforms are conservatively designed for ice loading. The original design criteria for Platform C was 150 kips per foot of leg diameter applied to all four legs. This loading was based on a probabilistic 100-year ice thickness of 42 inches and ice strength of 300 pounds per square inch (psi) in compression. For Platform A, a more conservative loading of 195 kips/ft was used in the design since not all research had been completed. This loading equates to approximately 6 feet of ice on the leading legs and 3 feet on the rear legs.

The platforms are designed for tsunamis with freeboard of approximately 40 feet above the mean low low water. The Onshore Facility is located atop a bluff 200 feet above the water level.

The high currents in Cook Inlet introduce the problem of scour around the platform legs. The platform legs were designed with the assumption of five feet of scour. To prevent excessive scour, regular inspections are conducted and sandbags (or other appropriate fill) are installed when necessary.

2.4.2 Pipelines

Operational conditions that have the potential for increasing the risk of a pipeline spill are scour, excessive movement, external corrosion damage, internal corrosion damage, and mechanical damage. Annual multi-beam surveys are conducted to monitor for these conditions. The pipelines are protected from external corrosion by coatings and a cathodic protection system, which is regularly monitored. Internal corrosion is monitored by corrosion coupons.

Should increase potential for a spill develop, appropriate procedures would be followed. The procedures could result in increased monitoring, restricted, or stopped flow, depending on the circumstances. The specific procedures for abnormal operations are included in the "Offshore Pipeline Operations Manual" which has been prepared in conjunction with the DOT Pipeline Safety Regulations.

2.5 Discharge Detection

Discharge detection at XTO MGS facilities relies on visual surveillance and on mechanical and electronic systems. Table 2.5-1 provides a summary of the discharge detection systems.

Table 2.5-1 Middle Ground Shoal Discharge Detection Systems

Type	Item	Features	Limitations
PLATFORM PRODUCTION SYSTEMS			
Surveillance	Visual inspection	Several times per day	N/A
	Helicopter overflight/supply vessel	Could detect a spill on the water	Weather
Mechanical and electronic systems	Gas detection	20% lower explosive level (LEL) for hydrocarbon vapors; 15 ppm for hydrogen sulfide Failsafe (alarm sounds if system fails) Power backup	Some rooms on platforms have no gas detection, but the possibility of a spill is very low in those rooms
	Sump	(b) (7)(F)	
		(b) (7)(F)	
	Fire alarm	Infrared sensor	A fire could be fed by a leak
PLATFORM FUEL TRANSFER SYSTEMS			
Surveillance	Monitoring	System continuously monitored during transfer U.S. Coast Guard -approved procedures Daylight only	N/A
ONSHORE PRODUCTION SYSTEM			
Surveillance	Visual inspection	Several times per day	N/A
Mechanical and electronic systems	Gas detection (in enclosed areas)	20% LEL for hydrocarbon vapors; 15 ppm for hydrogen sulfide Failsafe (alarm sounds if system fails) Power backup	Some enclosed areas do not have gas detection, but the possibility of a spill is very low in those areas
	(b) (7)(F)	(b) (7)(F)	

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

PART 3 SUPPLEMENTAL INFORMATION..... 3-1

3.1	FACILITY DESCRIPTION AND OPERATIONAL OVERVIEW.....	3-1
3.1.1	FLOWLINE ROUTING	3-1
3.1.2	OIL STORAGE CONTAINERS	3-1
3.1.3	TRANSFER PROCEDURES (TO OR FROM TANK VESSEL)	3-2
3.2	RECEIVING ENVIRONMENT (FOR ONSHORE FACILITY)	3-3
3.2.1	ROUTES OF TRAVEL TO OPEN WATER.....	3-3
3.2.2	AMOUNT TO REACH OPEN WATER	3-3
3.3	COMMAND SYSTEM	3-7
3.4	REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS.....	3-10
3.5	LOGISTICAL SUPPORT	3-10
3.6	RESPONSE EQUIPMENT.....	3-10
3.7	NOTIFICATION OF NON-READINESS.....	3-12
3.8	NON-MECHANICAL RESPONSE INFORMATION.....	3-13
3.9	RESPONSE CONTRACTOR INFORMATION	3-13
3.10	SPILL RESPONSE TRAINING	3-19
3.11	PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS AND AREAS OF PUBLIC CONCERN	3-20
3.11.1	PREDICTION OF DISCHARGE MOVEMENT	3-20

TABLES

TABLE 3.1-1	MIDDLE GROUND SHOAL OIL STORAGE CONTAINERS (CAPACITY >10,000 GAL.)	3-2
TABLE 3.6-1	ESTIMATED RESPONSE TIMES FOR MOBILIZING AND TRANSPORTING EQUIPMENT FROM OTHER LOCATIONS IN ALASKA.....	3-12
TABLE 3.10-1	TRAINING FOR XTO DISCHARGE RESPONSE PERSONNEL.....	3-19
TABLE 3.11-1	CENTRAL COOK INLET GRS.....	3-20

FIGURES

FIGURE 3.2-1	TOPOGRAPHIC MAP OF XTO'S MGS ONSHORE FACILITY	3-5
FIGURE 3.3-1	LAYOUT OF CISPRI'S COMMAND CENTER	3-8
FIGURE 3.3-2	LOCATION MAP FOR XTO'S KENAI OFFICE AND ONSHORE FACILITY.....	3-9
FIGURE 3.5-1	ROADS AND STAGING AREAS IN COOK INLET	3-11
FIGURE 3.9-1	STATEMENT OF CONTRACTUAL TERMS - CISPRI	3-15
FIGURE 3.9-2	STATEMENT OF CONTRACTUAL TERMS – WITT O'BRIEN'S	3-17
FIGURE 3.11-1	ENVIRONMENTALLY SENSITIVE AREAS IN COOK INLET	3-22

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

PART 3 SUPPLEMENTAL INFORMATION

3.1 Facility Description and Operational Overview

3.1.1 Flowline Routing

This plan covers XTO's offshore Middle Ground Shoal (MGS) facilities in Cook Inlet. The MGS facilities consist of two offshore oil platforms (Platform A and Platform C) and an onshore separation and processing facility located on the east side of Cook Inlet near Nikiski (Onshore Facility).

Platform A is located 6 miles from the Onshore Facility. Platform C is approximately 5 miles from the Onshore Facility. Platform A is located at latitude (b) (7)(F). Platform C is located at (b) (7)(F). The Onshore Facility is located approximately 22 miles northwest of Kenai at (b) (7)(F). The Onshore Facility is located at 52260 Wik Road. Kenai, AK 99611.

The combined daily production of Platforms A and C is approximately 2,800 barrels of oil per day (bopd). The produced gas is compressed and utilized for both gas lift and fuel gas. Flow lines "A", "B", and "C" are used to transport oil, gas, and water between Platforms A and C and the onshore facilities. Flowline "A" (A-Line) begins at Platform A and ends at a pig receiver located at the Onshore Facility. The A-Line segment is approximately 7 miles long. Flowline "B" (B-Line) is a flow line that begins at Platform A and ends at a pig receiver located at the Onshore Facility. The B-Line segment is approximately 7 miles long and runs parallel to A-Line. Flowline "C" (C-Line) begins at Platform C and ends at a subsea connection with the B-Line, adjacent to Platform A. The C-Line segment is approximately 2.3 miles long. In June 2005 the A-Line was converted to gas service, to bring fuel gas from onshore to Platforms A and C. Oil is transported from Platform C via the C-Line which connects into the B-Line at Platform A and continues to the Onshore Facility. If necessary, the A-Line can be returned to liquid hydrocarbon service. Block valve manifold systems installed at both platforms allow oil to be transported to shore through the "B" Line. There is approximately 1,400 ft of onshore pipeline running from Cook Inlet to the pig trap building. The oil is treated to remove produced water, and is transferred to the KPL pipeline through an onsite LACT unit. Produced water is treated and discharged to Cook Inlet under a National Pollutant Discharge Elimination System (NPDES) permit.

3.1.2 Oil Storage Containers

(b) (7)(F) Both platforms have onboard diesel fuel storage in the structural girders of the platform. Platform A has one on-deck tank and one girder tank currently in use. There are two shipping tanks and one girder tank, which are currently active on Platform C. The platform tanks vary in size with the largest being a girder tank or (b) (7)(F) fuel. There are no crude oil storage structures on either platform.

Table 3.1-1 provides information on these containers on Platform A, Platform C, and the Onshore Facility.

Table 3.1-1 Middle Ground Shoal Oil Storage Containers (Capacity >10,000 Gal.)

Tank	Type of Tank	Contents	Capacity	Amount Typically Stored	Installation Date	Design and Construction
Platform A						
On-Deck Tank (Shipping Tank)	Surge	Crude oil/water mixture	(b) (7)(F)	Normally pumped to low-level shutdown	1968	Rectangular welded steel
2-3 Girder	Storage	Diesel		Varies	1964	Cylindrical steel designed as platform structural member
NOTE: Girders 1-2, and 3-4 and 4-1 are				e.		
Platform C						
Shipping Tank	Surge	Crude oil/water mixture		Normally pumped to low-level shutdown	1967	Rectangular welded steel designed as part of platform structure
Shipping Tank	Surge	Crude oil/water mixture		Normally pumped to low-level shutdown	1967	Rectangular welded steel designed as part of platform structure
3-4 Girder	Storage	Diesel		Varies	1967	Rectangular welded steel designed as part of platform structure
NOTE: Girders 1-2, and 2-3 and 4-1 are				e.		
Onshore Facility						
Tank 1	Surge	Crude		1,000 bbl but varies daily	2012	API Spec.12D
Tank 2	Surge	Crude	Varies daily	2012	API Spec.12D	
Tank 3	Surge	Crude	Varies daily	2012	API Spec.12D	
Sump tanks (2)	Sump	Crude oil/water mixture		Normally empty	2002	API 653

3.1.3 Transfer Procedures (To or From Tank Vessel)

Both platforms have onboard diesel fuel storage in the structural girders of the platform. Diesel used primarily during drilling operations is transferred to the platforms via a hose from the supply vessel. Each platform has a U.S. Coast Guard-approved marine transfer operations manual with detailed procedures for this transfer. As described in Section 2.4, only one vessel at a time can transfer fuel to a platform.

3.2 Receiving Environment (For Onshore Facility)

3.2.1 Routes of Travel to Open Water

Figure 3.5-1 provides a detailed satellite image of the XTO Middle Ground Shoal Onshore Facility. Topographic information for the onshore facility is also available on Figures 3.2-1. The facility is located on a bluff adjacent to Cook Inlet.

Site topography and drainage patterns were considered for all potential spill areas at the MGS Onshore Facility. From this evaluation, it was determined that a spill of oil or oil/water would not drain toward Cook Inlet (exclusive of the flowlines from the platforms). The major potential spill locations are briefly described below:

Surge Tanks: The surge tanks are positioned within a secondary containment area constructed in 2012, comprised of concrete dike walls with a flexible membrane lined dike. The secondary containment area has a capacity of 5,416 bbl (see Section 2.1.) If a breach occurred in the secondary containment dike during a major spill, oil would drain south to southeast from the spill area, over the road and laydown area, and then down gradient to the pond located below the sump tank.

LACT Building: The LACT sump is a 10-barrel carbon steel tank, 4 feet diameter by 4.5 feet in depth. A sump pump will pump oil back into the system. A spill or pump failure will result in oil draining away from the LACT building and the inlet in two directions: (1) southwest to a drainage area at the southern boundary of XTO's property and then to the pond south of the sump tank and (2) east on the road surface toward the surge tank secondary containment berm and then down gradient to the pond.

Freewater Knockouts #1 and #2: A spill will drain east to southeast toward the surge tank secondary containment area and continue south to the slope above the pond and eventually collect in the pond.

Distribution Building: A spill from the flow splitter or the heat exchanger will collect in the area contained by earthen berm on the southwest side of the building and the elevated road surfaces on the other three sides. Escapement from this 6,000-barrel area would drain to and be contained by the 4,400-barrel secondary containment of the sump tank and then to the pond located at the south property boundary. The spill could be directed to a lesser degree toward the catchment basin located next to the flotation cell building.

Sump Tanks: A spill from either of the (b) (7)(F) will be contained by the (b) (7)(F) secondary containment around the sump tank. The dike is constructed of imported non-frost-susceptible sand and varying amounts of organics; the berm is lined with a continuous Polyurea coated Geotech liner on the entire inside surface. If the containment is breached, the spill will drain down gradient to the pond located directly south of the sump tank.

Pig Trap: The pig trap building is built over a 300-barrel concrete cellar. A major spill will overflow the sump and drain northwest to the 3,000-barrel catchment basin (depression) west of the flotation cell building.

3.2.2 Amount to Reach Open Water

A spill from either of the two flowlines in the 1,400-foot stretch from the water line to the pig trap building at the Onshore Facility could reach water. The volume of each 8-inch-diameter line over this stretch is approximately 75 barrels, which is less than half of the response-planning standard of 175 barrels for the flowline.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

3.3 Command System

Oil spill emergency response incidents at XTO facilities use a command system and organizational structure based on the National Inter-Agency Incident Command System (ICS). The ICS provides clear definition of roles and lines of command, together with the flexibility for expansion or contraction of the organization as necessary. XTO uses the guidelines set forth in the *U.S. Coast Guard Incident Management Handbook* dated August 2006 to implement the ICS. This handbook provides an easy reference job aid for responders with position descriptions and checklist to facilitate functional responsibilities for a variety of situations. The document is available for download at <http://www.uscg.mil/hq/nswfweb/docs/FinalIMH18AUG2006.pdf>. The handbook is also consistent with the *Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges / Releases (Unified Plan)* and with the CISPRI's response organization.

The XTO organization is led by Incident Commander (IC) who is supported by the following section chiefs: Operations, Planning, Finance, and Logistics. Because of XTO's limited manpower, sections are able to help in other areas as needed. In the event of a larger response, XTO maintains a contract with Witt O'Brien's to provide trained Incident Management personnel to supplement position staffing for ongoing response efforts.

Ramp-up of the Incident Management Team (IMT) is incident specific and as follows:

Immediate Emergency Response Team (Onsite): Would initiate the first response to any emergency. The XTO PIC, designated as the Drilling Foreman or On-Duty Mechanic (in that order) on Platforms A and C, and the Maintenance Foreman or Operator (in that order) at the Onshore Facility, makes evaluates the spill or emergency and determines the level of response required.

Initial Emergency Response Team (Alaska-Based): Would serve as the initial backup response organization. This team is composed of XTO Alaska personnel and contractors and would function for approximately 24 hours until superseded by the Major Emergency Response Team for major spills.

Major Emergency Response Team: Would be activated if some level of activation of XTO's contract Spill Response Team and/or XTO's Lower 48 personnel were required. This team would provide a longer-term response and upon arrival in Kenai would replace the Initial Emergency Response Team.

For significant oil spills of Tier II and III magnitude, a Federal On Scene Coordinator (FOSC), State On Scene Coordinator (SOSC), and, possibly, a Local On-Scene Coordinator may function in the Unified Command participating alongside XTO's IC. As part of the UC, these individuals represent their organizations and each contributes to the process of:

- Determining and establishing overall incident objectives and priorities;
- Selecting strategies;
- Planning for tactical activities;
- Conducting integrated tactical operations; and
- Using resources efficiently and effectively.

The Responsible Party functions as the Incident Commander in the Unified Command structure unless the FOSC or SOSC determines the response is inadequate. At that time, either the SOSC or FOSC will assume the Incident Commander's duties.

Appendix A provides the Contact List for XTO's IMT Organization Chart, a list of the IMT ICS positions, and the personnel assigned to fill these roles. XTO's IMT is assisted through the response by their response contractor, CISPRI. CISPRI also implements immediate response operations and containment and recovery operations. As described in Section 1, Tier II/III responses are managed from CISPRI's Command Center. See Figure 3.3-1 for a diagram of the CISPRI Command Post. Figure 3.3-2 provides a location map of XTO's Kenai Office and Onshore Facility.

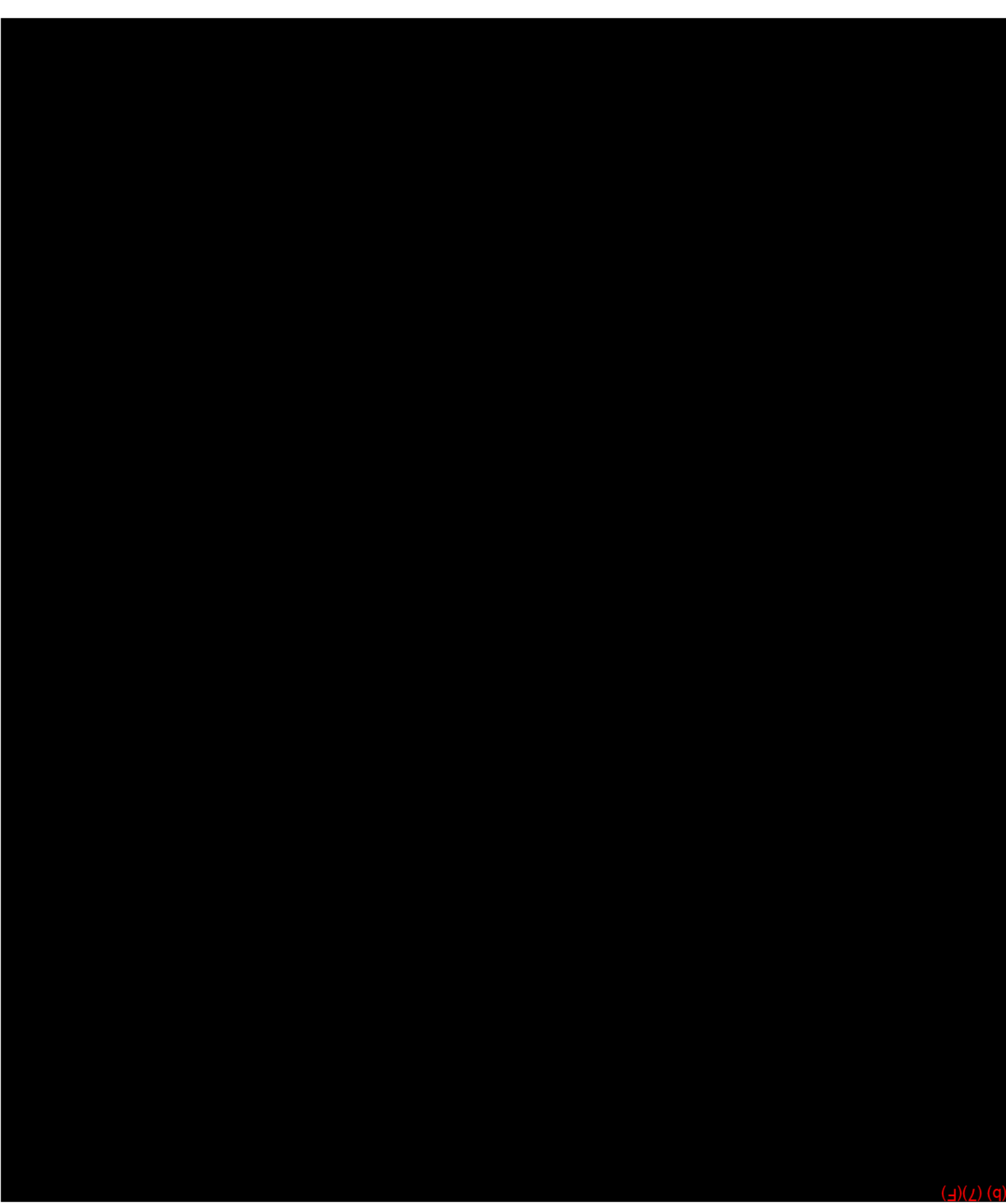
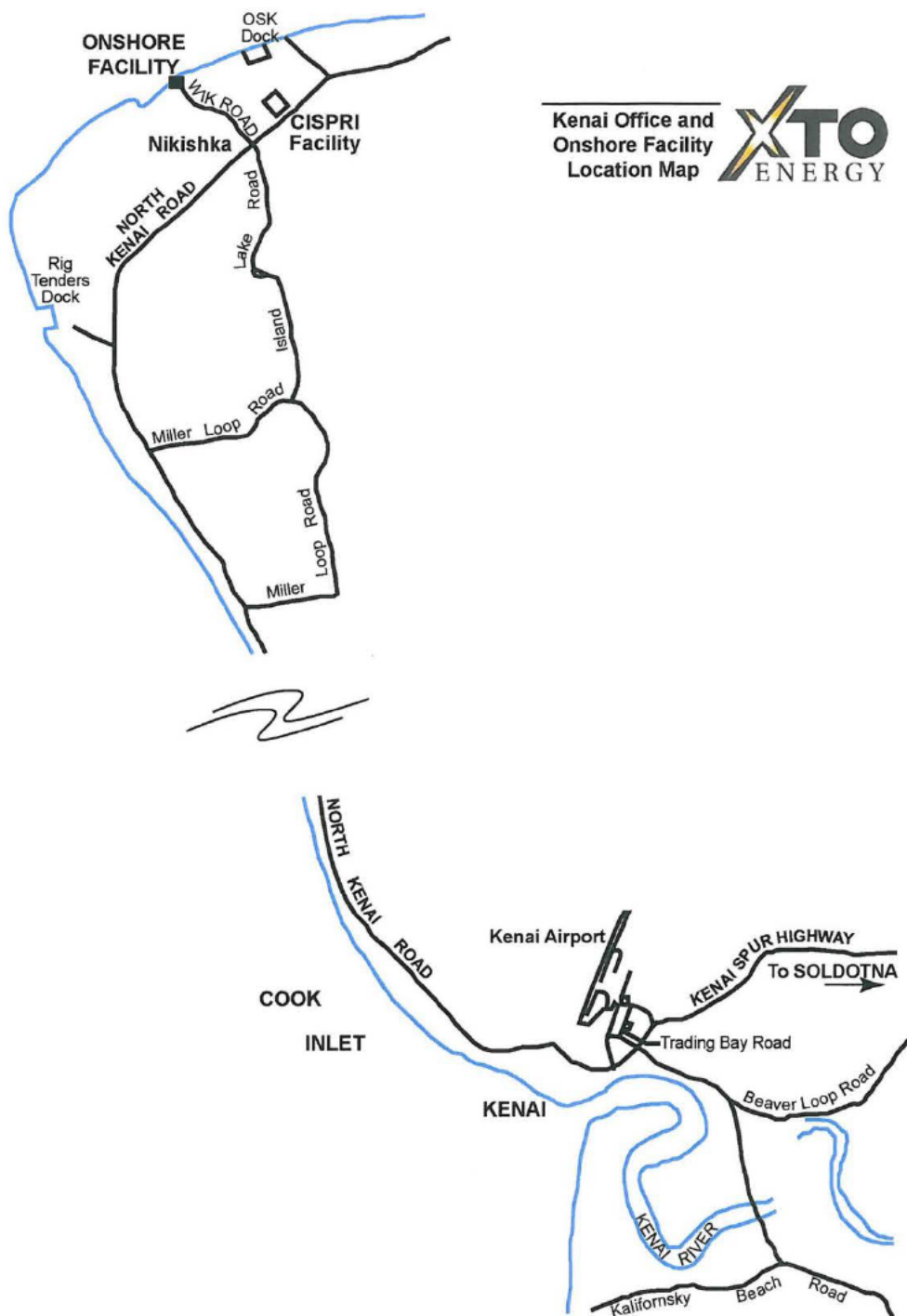


Figure 3.3-2 Location Map for XTO's Kenai Office and Onshore Facility

3.4 Realistic Maximum Response Operating Limitations

As a member of CISPRI, XTO relies on CISPRI equipment to clean up any spill to water from MGS facilities. Refer to the CTM Appendix B for a discussion of the realistic maximum response operating limitations for CISPRI spill response equipment.

3.5 Logistical Support

As a member of CISPRI, XTO relies on the logistical support contracts maintained by CISPRI to provide aircraft, vessels, and other means of transporting equipment and personnel. This information is contained in the CTM Tactics CI-LP-1, CI-LP-3 through CI-LP-6.

Response times to the platform locations for helicopters and for workboats depend on the staging area, personnel, tides, weather conditions, and the time necessary to mobilize equipment. Various combinations of transportation methods may be required to respond to a spill. For example, a spill at Platform A could be reached by flying personnel and heavy equipment from Anchorage to Kenai and transporting this equipment by truck to the Nikiski dock, by mobilizing equipment staged at Nikiski and using response vessels for transportation to the spill site, or by handling the entire response out of Anchorage. CTM CI-LP-1 through CI-LP-6 illustrates response times throughout the CISPRI response region (described in CTM Intro) for various methods of travel and mobilization time frames for contracted, non-obligated and out-of-region resources. Maps showing response times can also be found in the CTM Tactic CI-LP-1. Pre-staged equipment packages throughout Cook Inlet are described in CI-LP-4. Figure 3.5-1 shows roads and staging areas available for use during a spill response.

3.6 Response Equipment

XTO relies on CISPRI for response to any spill occurring on water as well as on land, including spills that may or may not reach open water from MGS facilities. Manpower and equipment available for use in the event of a spill are inventoried in the CTM Appendix A and Tactics CI-LP through CI-LP-6. Equipment suppliers and locations are also included in these tactics. In addition, a list of equipment used to meet the criteria for a spill recovery, is included in CTM Appendix A. Appendix B of the CTM contains information about the realistic maximum response operating limitations (RMROL) for the equipment. CISPRI equipment stationed at Nikiski includes offshore skimming systems, response vessels, containment booms, sorbents, transfer and storage system, and equipment for applying dispersants and for using in-situ burning.

XTO maintains sufficient inventories of PPE at MGS facilities for use in emergency response and for other non-routine work such as confined space entry. The Onshore Facility has at least one self-contained breathing apparatus (SCBA), stationary gas and hydrogen sulfide monitors, and portable multi-gas detectors. Some pipe repair clamps are available at the facility; however, pipe repair kits are readily available in the area from such sources as National Oilwell in Kenai. Liner material for a temporary storage area for oiled debris is maintained at the Onshore Facility.

The platforms each have at least three SCBAs, stationary gas and hydrogen sulfide monitors, and portable multi-gas detectors. All oil and chemical drums are kept in areas with a solid floor and lip. Each platform has designated band-top drums for storage of solid oily waste; liquid oil waste is reprocessed through the production system. At least one air-operated double-diaphragm pump is available between the platforms to serve as a backup to the sump pumps in the platforms' containment system.

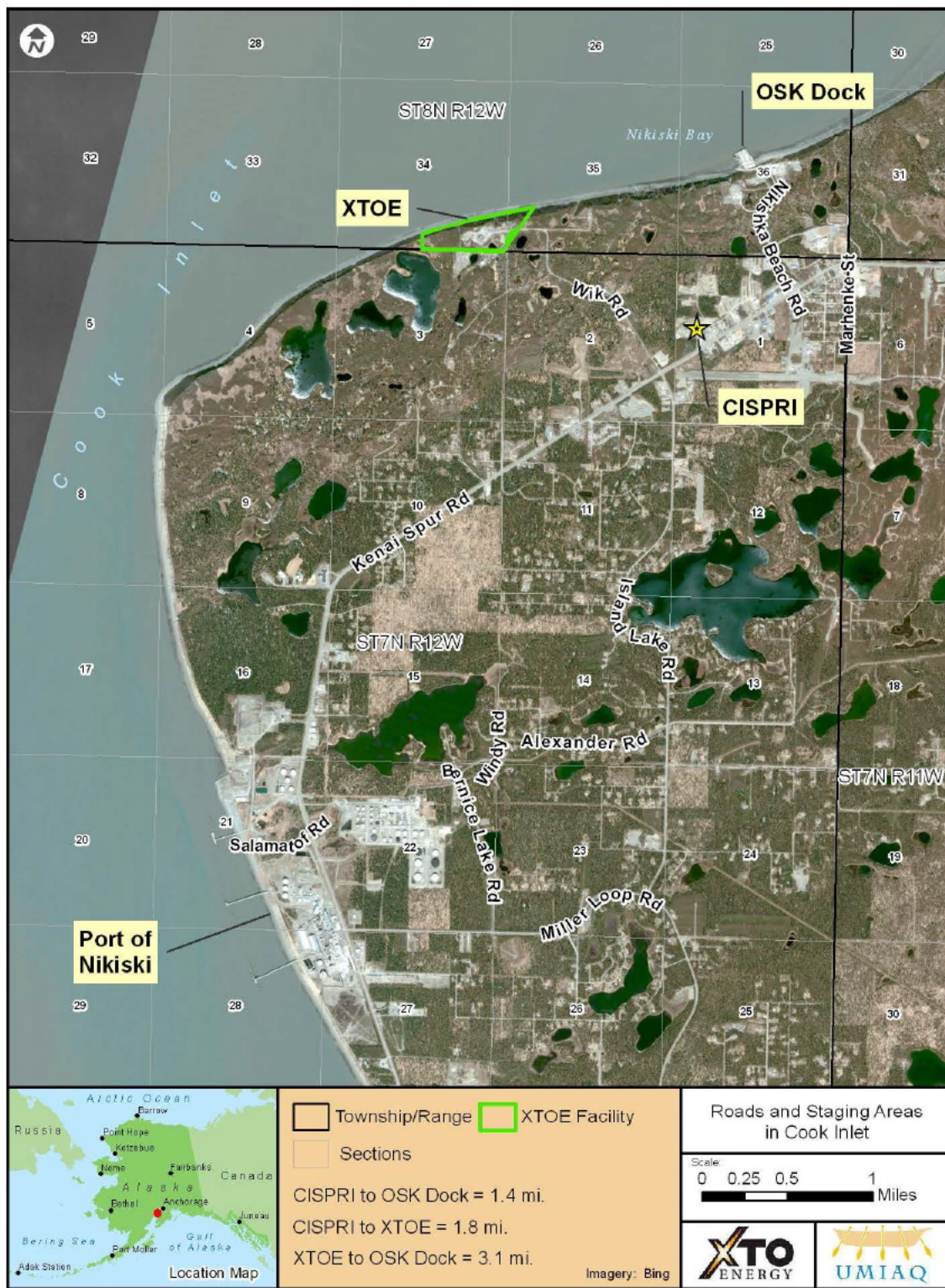
Figure 3.5-1 Roads and Staging Areas in Cook Inlet

Table 3.6-1 Estimated Response Times for Mobilizing and Transporting Equipment from Other Locations in Alaska

Equipment Location	Transport Logistics	Loading Time (hr)*	Travel Time to Anchorage (hr)	Loading Time (hr)*	To Site (hr)	Total Time (hr)
Anchorage	Helicopter to site	4	N/A	N/A	0.8	4.8
	Workboat to site	4	N/A	N/A	7.2	11.2
	Truck to Nikiski	4	N/A	N/A	4.5	8.5
	Workboat to site	4	N/A	N/A	2.0	6.0
Nikiski	Workboat to Site	4	N/A	N/A	2.0	6.0
	Helicopter to Site	4	N/A	N/A	0.2	4.2
	Truck to MGS	4	N/A	N/A	0.2	4.2
	Onshore Facility**					
Homer	Workboat to Site	4	N/A	N/A	5.5	9.5
Kenai	Workboat to site	4	N/A	N/A	2.2	6.2
	Helicopter to Site	4	N/A	N/A	2.0	6.0
Deadhorse	Hercules (C-130) to Anchorage;	4	1.4	2.0	0.8	8.2
	Helicopter to site					
	Truck to Nikiski	4	24	N/A	4.5	32.5
	Workboat to site	4	N/A	N/A	2.0	6.0
* Loading times vary with type and amount of equipment and include logistics to loading site. ** Helicopter time from the MGS Onshore Facility to either Platform A or Platform C is about 0.2 hr. NOTE: All travel times are subject to substantial increases if adverse weather conditions prevail.						

In order to handle operational spills that may occur at MGS facilities, XTO maintains 2 poly type overpack drum spill response kits on each platform. These kits include all items necessary to respond to operational spills. The onshore facility maintains a large stock of absorbents, bales, and boom.

3.7 Notification of Non-Readiness

CISPRI is responsible for maintaining and regularly testing all response equipment as described in Appendix A of the CTM. If a significant change occurs, or is made to, any component of this plan that would diminish CISPRI's (and therefore, XTO's) response capability, ADEC will be notified in writing within 24 hours and a schedule provided for a prompt return to operational status. Approval will be sought from ADEC at least ten (10) days before removal or inactivation of any major response item for maintenance or repair. The CISPRI Contracted Vessel Program provides a substantial vessel fleet to aid in Cook Inlet spill response efforts. Mutual aid agreements with APSC also provide an added level of resources if a catastrophic event were to occur. These programs and agreements are discussed in the CTM Tactics CI-LP-3 and CI-LP-4.

3.8 Non-mechanical Response Information

The non-mechanical response options that are available to XTO are in-situ burning and the use of dispersants. In situ burning and dispersant application operations would be carried out by CISPRI as described in CTM Tactics CI-NM to CI-NM-5 with equipment inventoried in Tactic CI-LP-4 Tables 9 through 11 and additional personnel sources identified in CI-LP-3 Table 6.

Tactics CI-NM to CI-NM-5 provides a description of the methods to be used to assess the environmental consequences of using non-mechanical response strategies, the monitoring techniques available, an inventory of the non-mechanical response equipment and supplies and procedures for storage, maintenance, and deployment.

Tactics CI-NM-1 and CI-NM-3 summarize the permitting process for dispersants and in situ burn (respectively). CI-LP-6 list the permits required for a response including non-mechanical techniques. The CTM Tactics CI-NM-1 through CI-NM-5 all contain operational considerations that are taken into account to provide for protection of environmentally sensitive areas and areas of public concern.

The applications for permitting non-mechanical response options are found online at <http://www.dec.state.ak.us/spar/perp/permits/master.htm>.

3.9 Response Contractor Information

XTO is a member of the industry spill response cooperative Cook Inlet Spill Prevention and Response, Inc. (CISPRI) and as such has access to CISPRI's extensive equipment inventory and trained response personnel. Procedures for activating CISPRI are contained in Section 1.2 of this plan.

A copy of the response action contract between CISPRI and XTO is provided in Figure 3.9-1.

XTO also maintains a contract (Figure 3.9-2) with Witt O'Brien's to provide management team personnel if needed.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

Figure 3.9-1 Statement of Contractual Terms - CISPRI**STATEMENT OF CONTRACTUAL TERMS**

AS REQUIRED UNDER AS 46.04.30, as 46.04.035 AND 18 AAC 75.445(l)(1) in fulfillment of a requirement for registration of primary response action contractors and for approval of an Oil Discharge Prevention and Contingency Plan.

Plan Title: XTO Energy, Inc. Oil Discharge Prevention and Contingency Plan

Plan Holder: XTO Energy, Inc.

This statement is a certification to the Alaska Department of Environmental Conservation summarizing the contract between XTO Energy, Inc., the oil discharge prevention and contingency plan holder (hereinafter "PLAN HOLDER"), and Cook Inlet Spill Prevention and Response, Inc., the oil spill primary response action contractor (hereinafter "CONTRACTOR"), executed on 3-30-2011, and the original of which is located at the offices of XTO Energy, Inc. as evidence of the PLAN HOLDERS access to the containment, control and / or cleanup resources required under standards at AS46.04.030 and 18AAC75.400 – 18AAC75.495. The PLAN HOLDER and the CONTRACTOR attest to the provisions of this written contract clearly obligate the CONTRACTOR to:

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

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

3-30-2011

Signature

Date

Title: Production SuperintendentFor: XTO Energy, Inc.

PLAN HOLDER

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

3-30-2011

Signature

Date

Title: General ManagerFor: Cook Inlet Spill Prevention and Response, Inc.

CONTRACTOR

Figure 3.9-2 Statement of Contractual Terms – Witt O'Brien's

1

STATEMENT OF CONTRACTUAL TERMS

(PLEASE COMPLETE BOTH SIDES)

AS REQUIRED UNDER AS 46.04.30, AS 46.04.035 and 18 AAC 75.445(i)(1) in fulfillment of a requirement for registration of primary response action contractors and for approval of an Oil Discharge Prevention and Contingency Plan.

PLAN TITLE: XTO Energy Inc. Oil Discharge Prevention and Contingency Plan,

PLAN HOLDER: XTO Energy Inc.,

This statement is a certification to the Alaska Department of Environmental Conservation summarizing the contract between XTO Energy Inc., the oil discharge prevention and contingency plan holder (hereafter "PLAN HOLDER"), and O'Brien's Response Management Inc., the oil spill primary response action contractor or a holder of an approved oil discharge prevention and contingency plan under contract (hereafter "CONTRACTOR"), executed on October 22, 2002, and the original of which is located at the offices of XTO Energy Inc., as evidence of the PLAN HOLDER's access to the containment, control and/or cleanup resources required under standards at AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495. The PLAN HOLDER and the CONTRACTOR attest to the Department that the provisions of this written contract clearly obligate the CONTRACTOR to:

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

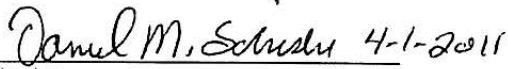
2

STATEMENT OF CONTRACTUAL TERMS

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


Signature4-19-11
DateName: Kyle HammondTitle: Vice President OperationsFOR: XTO Energy Inc.
PLAN HOLDER

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


Signature4-1-2011
DateName: Daniel M. SobieskiTitle: Executive Vice President Consulting ServicesFor: O'Brien's Response Management Inc.
CONTRACTOR

3.10 Spill Response Training

XTO contracts with CISPRI to provide oil spill response services. XTO personnel do not act as the primary responders to spills. Therefore, XTO's spill response training programs are designed to prepare XTO personnel to assist CISPRI personnel.

The table below contains a summary of the training programs for XTO discharge response personnel. A description of the training program is provided below.

Table 3.10-1 Training for XTO Discharge Response Personnel

ICS Job Title	HAZWOPER (24 Hr) Plus 8 Hr Annual Refresher	ERP* (4 Hr)	ICS (4 Hr)
Incident Commander	X	X	X
Operations Section Chief	X	X	X
Onshore Response Unit Leader	X	X	X
Offshore Response Unit Leader	X	X	X
Safety Officer	X	X	X
Logistics Section Chief		X	X
Equipment/Materials Unit Leader		X	X
Liaison Officer		X	X
Regulatory Support Unit Leader		X	X
Immediate Response Team (Onshore)	X	X	X

*Emergency Response Plan

HAZWOPER 24-Hour Training: This training covers the topics required under federal Occupational Safety and Health Administration rules (29 CFR 1910.120) and State of Alaska Department of Occupational Safety and Health regulations (8 AAC 10.101) for personnel involved in post-emergency response. Topics include the hazards of spilled oil, PPE, and safe work practices (see CTM Appendix E).

ERP Training: This 4 to 6-hour training covers the elements of the XTO Alaska Producing Operations Emergency Response Plan (ERP) and normally takes the form of a tabletop drill. All personnel identified as response team members attend at least one tabletop drill per year, and that drill may cover any type of emergency.

ICS Training: Response team members attend a 4-hour training course on their respective incident command system positions (incident command, operations section, planning section, finance system, or logistics section) (CTM Appendix E).

Because XTO personnel are not involved in direct, hands-on spill cleanup or operation of containment and recovery equipment, they do not attend hands-on spill response training courses. CISPRI personnel will provide those services. It is the role of XTO personnel to work with CISPRI personnel in the incident command system to provide the management, planning, and logistics required for response.

In addition to the above training, XTO personnel are required to complete numerous training courses geared to their duties. For example, personnel are trained in CPR, first aid, fighting incipient fires, and use of PPE appropriate to the individual's job. In addition, all personnel receive hazard communication training covering hazardous substances in the workplace.

Training programs for CISPRI personnel are detailed in CTM Appendix E.

3.11 Protection of Environmentally Sensitive Areas and Areas of Public Concern

Cook Inlet Subarea Contingency Plan, Part D Sensitive Areas Section and Part G Geographic Response Strategies provide information on sensitive areas and related resources in the Cook Inlet area. As an example, *Sensitive Areas of Major Concern* located in Central Cook Inlet (CCI) are summarized below. Additional areas of concern have been identified and GRS developed for sites in Northern, Southwestern, Southeastern and Kachemak Bay. These GRS are also available online at <http://www.dec.state.ak.us/spar/perp/grs/ci/home.htm>.

Table 3.11-1 Central Cook Inlet GRS

GRS	Location	GRS	Location
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	Middle River
CCI-21	Middle River	CCI-22	Swanson River

Tactics CI-SA through CI-SA-3 should also be referenced to assist in identifying other areas that may be prioritized for protection, as the GRS do not address all the sensitive areas within Cook Inlet. Tactics CI-NS-1 through CI-NS-6 provides tactical descriptions for protection of sensitive areas. Priority protection sites are established in consultation with trustee agencies on an incident specific basis. The subarea plan also provides an Emergency Response Notification List and agency contacts.

In the event of a spill, CISPRI contacts a cultural resources specialist that is under contract to CISPRI and transferable to its member companies as described in Tactic CI-SA-3. The Department of Natural Resources and Office of History and Archaeology are also integrated into the spill through ADEC and will work closely with CISPRI's specialist to mitigate damage to such sites and materials that may be encountered. A video has been developed with the Department of Natural Resources and Office of History and Archaeology advising potential beach cleaning personnel what to look for and what to do should they find artifacts of any kind.

Additional information on environmentally sensitive areas is contained in *Most Environmentally Sensitive Area (MESA)* maps, Volume II, Prepared by Alaska Department of Fish & Game (ADF&G) in June 2000. Tactics CI-NS to CI-NS-6 provides tactical strategies for minimizing impact of spilled oil to sensitive areas. These tactics are incorporated into both scenarios presented in this plan.

3.11.1 Prediction of Discharge Movement

At the time of a spill, the trajectory of the spilled oil will be estimated for the first 12 hours using tide tables, wind speed, and wind direction. However, based on experience in actual spills and local knowledge, it is anticipated that a spill from the MGS platforms or flow-lines would move up and down the inlet with the ebb and flow of the tide.

The oil would likely be concentrated in the east rip and work its way west to the mid-channel rip and west rip, while following a general southwesterly trajectory. The most likely points of shoreline contact are the east side of Kalgin Island and Nikiski Bay just north of the East Foreland facility. Figure 3.11-1 shows the

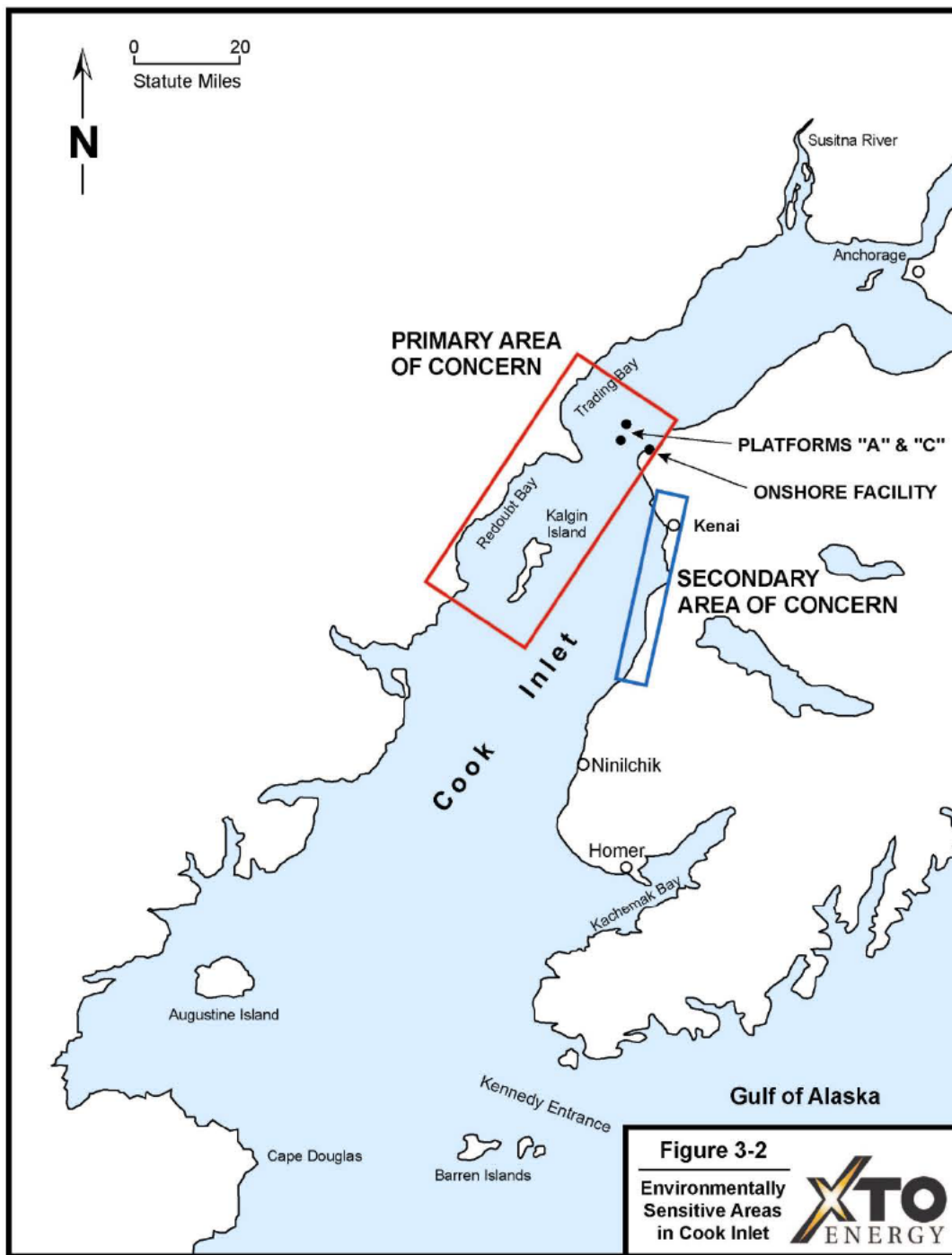
primary and secondary areas of concern based on such an analysis. For 12 hours and beyond, the NOAA Scientific Support Coordinator would be consulted.

The use of the NOAA Gnome trajectory model would also be requested. Cook Inlet is recognized to be a highly complex with extreme tides, strong currents, at least three strong dominant rip zones. Historical spills in the Inlet and ongoing research indicates that oil spills in Cook Inlet will tend to move into and concentrate in these rip zones, traveling along the rips at current speeds of up to 5-6 knots.

Following are the sensitive areas that could potentially be impacted by a spill from XTO MGS facilities:

- Swamp and Packers Creeks on the east shore of Kalgin Island;
- Mouth of the Kasilof River; and
- Mouth of the Kenai River.

CISPRI has response packages that can be used for these locations. The mouth of the Swanson River north of Boulder Point would also be monitored and boomed if it appeared that oil threatened it. All of these streams support salmon runs, and are considered sensitive throughout the year.

Figure 3.11-1 Environmentally Sensitive Areas in Cook Inlet

PART 4 BEST AVAILABLE TECHNOLOGY 4-1

4.1	COMMUNICATIONS.....	4-1
4.2	SOURCE CONTROL PROCEDURES.....	4-1
4.2.1	LOSS OF WELL CONTROL	4-1
4.2.2	RUPTURE OF THE FLOWLINES TO SHORE.....	4-1
4.2.3	FAILURE OF THE ONSHORE SURGE TANKS.....	4-2
4.2.4	FAILURE OF THE PLATFORM DIESEL FUEL STORAGE TANKS	4-2
4.3	TRAJECTORY ANALYSIS AND FORECASTS.....	4-2
4.4	WILDLIFE CAPTURE, TREATMENT AND RELEASE PROGRAMS.....	4-2
4.5	CATHODIC PROTECTION OR ANOTHER APPROVED CORROSION CONTROL SYSTEM	4-2
4.6	A LEAK DETECTION SYSTEM FOR EACH TANK	4-3
4.7	ANY OTHER PREVENTION OR CONTROL SYSTEM APPROVED BY THE DEPARTMENT	4-3
4.7.1	PLATFORM A & C GIRDER (DIESEL FUEL) TANKS AND PLATFORM C SHIPPING TANKS.....	4-3
4.7.2	PLATFORM A ON-DECK TANK	4-3
4.7.3	ONSHORE SURGE AND SUMP TANKS	4-3
4.8	A MEANS OF IMMEDIATELY DETERMINING THE LIQUID LEVEL OF BULK STORAGE TANKS	4-4
4.8.1	PLATFORM A & C GIRDER (DIESEL FUEL) TANKS.....	4-4
4.8.2	PLATFORM A ON-DECK TANK AND PLATFORM C SHIPPING TANKS.....	4-4
4.8.3	ONSHORE SURGE TANKS.....	4-4
4.8.4	ONSHORE SUMP TANKS.....	4-4
4.9	MAINTENANCE PRACTICES FOR BURIED STEEL PIPING CONTAINING OIL	4-4
4.10	PROTECTIVE WRAPPING OR COATING AND CATHODIC PROTECTION	4-5
4.11	CORROSION SURVEYS.....	4-5

TABLES

TABLE 4.11-1	BAT ANALYSIS: SOURCE CONTROL ON GATHERING LINES	4-6
TABLE 4.11-2	BAT ANALYSIS: SOURCE CONTROL ON ONSHORE SURGE TANKS.....	4-7
TABLE 4.11-3	BAT ANALYSIS: SOURCE CONTROL ON PLATFORM GIRDER TANKS (DIESEL FUEL)	4-8
TABLE 4.11-4	BAT ANALYSIS: HIGH LIQUID LEVEL, PLATFORM A & C GIRDER TANKS.....	4-9
TABLE 4.11-5	BAT ANALYSIS: BURIED PIPING MAINTENANCE PRACTICES	4-10
TABLE 4.11-6	BAT ANALYSIS: CORROSION SURVEYS	4-12
TABLE 4.11-7	BAT ANALYSIS: ONSHORE SURGE TANK LEAK DETECTION SYSTEM	4-14

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

PART 4 BEST AVAILABLE TECHNOLOGY

This section discusses the Best Available Technologies (BAT) requirements contained in 18 AAC 75.425(e)(4)(A), (B), and (C) to address technologies not subject to response planning standards or performance standards in 18 AAC 75.445(k)(1) and (2). The discussion of each technology covers the requirement to analyze applicable technologies and to provide a justification that the technology is BAT. The spill prevention and response equipment for Middle Ground Shoal meets the BAT requirements because it is subject to response planning standards and performance standards in 18 AAC 75.

4.1 Communications

The communications system for use in a spill response at Middle Ground Shoal is described in CTM Tactic CI-LP-2. Additional information is provided in Section 1.5 of this Plan.

4.2 Source Control Procedures

Source control procedures for purposes of this BAT analysis relate to loss of well control, rupture of the flowlines to shore, failure of the onshore surge tanks, and failure of the platform diesel fuel storage tanks. Control for each of these potential spill sources is discussed below.

4.2.1 Loss of Well Control

Production wells are equipped with SSVs in accordance with the regulations of the AOGCC in 20 AAC 25.265. This regulation requires SSSVs for all wells with an offshore surface location that can flow to the surface unassisted.

If well control is lost during drilling operations, resulting in an uncontrolled flow of fluids at the surface, detailed planning will begin to regain control. A thorough evaluation of the situation will be necessary to determine the best course of action. Three primary considerations in developing a well control plan based on specific well conditions are:

- Additional surface control measures;
- Ignition of the blowout; and
- Drilling a relief well.

4.2.2 Rupture of the Flowlines to Shore

The flowlines from the platforms to shore have both manual and automatic pipeline isolation valves in accordance with 49 CFR 195.260 and as described in section 2.1.10. A rupture of a flowline would be detected as described in section 2.1.10. The manual and automated valves are in locations to minimize operational and environmental risks. The combination of manual and automatic valves is considered BAT for the flowlines as no other technology was identified that would provide additional benefits. The valves provide a positive means of isolating the flowlines to stop inflow. Multiple valves are usually available such that a block and bleed condition can be achieved. Different valves or actuators do not yield better technology in this case. Valve technology has not progressed enough since valve installation to offer significantly more advanced construction. Actuator technology has advanced, but systems that are more modern would not provide a significant benefit to speed or reliability.

Depending on the nature of the pipeline failure, some means of securing a low-pressure release on the sea floor may be used. Because of the tidal conditions in Cook Inlet, any method employed would require divers. Remotely operated vehicles could not be used effectively because of the strong currents. Divers could secure a small hole with a tapered plug, screw plug or clamp. A large hole would likely be secured

with a clamp. If the failure were a full-bore break, stopples or another type of full-bore plug would be used. Patching would not reduce the volume released from a high-pressure release because of the time required to mobilize divers. A review of technologies is provided in Table 4.2-1.

4.2.3 Failure of the Onshore Surge Tanks

In the event of a failure of the surge tanks, flow into the tanks would be shut off with manual valves and the fluid in the tanks would be evacuated via the transfer pumps to a level below the leak to minimize the release to the berm area. If conditions permit, fluid would then be pumped out of the berm area and patching would then take place. The onshore surge tanks are within a lined berm and failure of the tanks would not result in a release beyond the bermed area, as described in section 2.2.12. In the event of failure of the onshore surge tank piping, manual valves on the piping would be closed to prevent further discharge. Transfer pumping and patching may also be implemented to reduce the volume of the release to the secondary containment area. Plugging or patching would consist of bolt tightening, application of c-clamps to tank plate connections, application of Belzona® sealing compound, installation of tapered plugs, or bonding a steel patch to the tank with adhesive. Materials for patching are kept on hand at the MGS Facility.

For source control from a storage tank, a combination of a manually operated valves, transfer pumps, patching, and secondary containment is considered BAT as no other technology was identified that would provide additional benefits. A review of technologies is provided in Table 4.2-2

4.2.4 Failure of the Platform Diesel Fuel Storage Tanks

The platform diesel tanks are girder tanks consisting of enclosed areas within the structural girders of the platform. Failure of the tank walls is unlikely because the structural steel that forms the tanks is much thicker than required for liquid containment, as described in section 2.2.12. The girder tank piping is the component of the tanks that may fail.

For source control from the girder tanks, a combination of manually operated valves and evacuation pumping equipment is considered BAT. Because the tanks are structural members, temporary patching such as a tapered plug or screw plug may be considered, but structural evaluation would be required. A review of technologies is provided in Table 4.2-3.

4.3 Trajectory Analysis and Forecasts

Trajectory analyses and forecasts are described in CTM Tactics CI-TS through CI-TS-4. Visual and electronic surveillance with tracking buoys in combination with Gnome trajectory modeling is considered BAT for Cook Inlet.

4.4 Wildlife Capture, Treatment and Release Programs

Wildlife capture, treatment, and release programs are described in CTM Tactics CI-W through CI-W-6. These tactics are considered BAT.

4.5 Cathodic Protection or Another Approved Corrosion Control System

The bottom design of the XTO facility surge tanks, constructed in 2012, was evaluated by a Corrosion Control Engineer and NACE Cathodic Protection Specialist. The corrosion evaluation indicated that the installation of cathodic protection systems for the tanks was not necessary. XTO provided the results and basis of the determination to ADEC in June of 2012.

The determination pointed to the tank bottom design as a factor in establishing a low corrosivity environment. Constructed on a concrete slab, the tank bottom is conical-shaped and raised a minimum of 12-inches above the dike floor to prevent standing water from encroaching under the tanks. These

design features prevent exposure of the tank bottom to moisture and reducing the potential for corrosion. The tank leak detection system also serves as a means to verify the tank bottom integrity. In the unlikely event a tank bottom leak were to occur, containment is provided by the concrete tank foundation as well as the secondary containment flexible liner. Based upon the corrosion expert determination that deemed the corrosion control system “not necessary”, no BAT analysis is required [18 AAC 75.065(j)(3) and 18 AAC 75.425(e)(4)(A)(ii)].

The sump tanks are existing installations; therefore, the requirements for cathodic protection do not apply. As such, no additional BAT analysis for the cathodic protection system has been conducted.

4.6 A Leak Detection System for Each Tank

Table 4.11-7 presents the analysis demonstrating BAT for the surge tank leak detection system. The tanks are installed on a concrete slab that is sloped from a high point at the tank center to the edges. Radial grooves placed into the slab at 45-degrees spacing would direct the flow of any product to the perimeter of the tank, where during scheduled inspections of the facility, an observer from outside the tank would readily detect leaks from the tank bottom. The system meets BAT and is reinforced by the use of secondary containment that also runs under the tanks concrete slabs.

The sump tanks are existing installations; therefore, the requirements for leak detection do not apply. As such, no additional BAT analysis for the leak detection system has been conducted.

4.7 Any Other Prevention or Control System Approved by the Department

4.7.1 Platform A & C Girder (Diesel Fuel) Tanks and Platform C Shipping Tanks

The platform girder tanks and shipping tanks are elevated and open to direct observation of leaks. They do not require additional leak detection equipment. Regulation 18 AAC 75.400 states that prevention measures demonstrated to be in compliance with the Performance Standards in 18 AAC 75.005-18 AAC 75.080 are determined to be equivalent by the ADEC. The leak detection system for these tanks is in accordance with 18 AAC 75.065(i)(1)(A). As such, no additional BAT analysis for the leak detection system has been conducted.

4.7.2 Platform A On-Deck Tank

The Platform A On-Deck Tank does not require additional leak detection equipment. The tank is located on an impermeable deck with catchment systems and leak detection sumps. Regulation 18 AAC 75.400 states that prevention measures demonstrated to comply with the Performance Standards in 18 AAC 75.005 - 18 AAC 75.080 are equivalent. The leak detection system for this tank complies with 18 AAC 75.065(i)(1)(A). Based on this, no additional BAT analysis for the leak detection system has been conducted.

4.7.3 Onshore Surge and Sump Tanks

The tanks are equipped with secondary containment (see Section 2.2.12). They do not require additional leak detection equipment because the leak detection system complies with 18 AAC 75.065(i)(1)(A). No additional BAT analysis for the leak detection system has been conducted.

4.8 A Means of Immediately Determining the Liquid Level of Bulk Storage Tanks

4.8.1 Platform A & C Girder (Diesel Fuel) Tanks

The girder tanks are equipped with level gauges. High-level alarms were added in 2001 to determine the liquid level and to alert the operators when filling operations should stop. Manual observation will continue to be the primary means of overfill protection, but the alarms will provide added protection. Levels are also manually checked before and after transfers from the vessel and the transferred volumes are metered. Each transfer involves a predetermined volume. Another option would be automatic shut-off valves; however, the existing system is considered BAT because automatic valves would afford little extra protection given the existing filling procedures and requirements for the continuous on-site presence of an operator during fill operation. A review of technologies is provided in Table 4.8-1.

4.8.2 Platform A On-Deck Tank and Platform C Shipping Tanks

The tanks are equipped with high-level alarms, local level indicators and level control pumps. They are also closely monitored during the operator's rounds. Since the tanks are equipped with high-level alarms in accordance with 18 AAC 75.065(j)(1), additional means of preventing overfilling are not required. As such, no additional BAT analysis for the leak detection system has been conducted. Further, since the tanks are located on platform decks with catchments and high-level sump alarm systems, no other means of determining the level of the liquid in the tank would provide any greater environmental benefit. (The tanks are equipped with local level gauges.)

4.8.3 Onshore Surge Tanks

In 2012, XTO constructed new surge tanks at the Cook Inlet onshore facility. The tanks are equipped with differential pressure-type level gauges with local and remote indicators, as well as high-level audible alarms. The tanks are equipped with overflow piping and are easily gauged.

The surge tanks are equipped with high-level alarms, meeting the performance standard established in 18 AAC 75.065(k)(1). This technology is considered BAT and no analysis is required [18 AAC 75.445(k)(2)]

4.8.4 Onshore Sump Tanks

The tanks are equipped with mechanical float-type level switches with high-level audible alarm and remote level indicator. The tanks can also be easily gauged. Since the tanks are equipped with high-level alarms in accordance with 18 AAC 75.065(j)(1), additional means of preventing overfilling are not required. As such, no additional BAT analysis for the leak detection system has been conducted. Further, since the tank has a fully lined containment area, no other means of determining the level of the liquid in the tank would provide any greater environmental benefit.

4.9 Maintenance Practices for Buried Steel Piping Containing Oil

Short sections of piping are buried at the Onshore Facility. Selected sections of the piping were excavated and inspected during a corrosion survey in 1995. The results of the inspection revealed no significant external corrosion damage (internal or external) after 27 years' service. The current methods of maintenance for the short sections of buried pipe include inspection of the piping when excavated, cathodic protection, and internal corrosion coupons. An impressed current anode system in place of the sacrificial anodes now installed has been identified as being the BAT for the cathodic protection system. The impressed current system is considered BAT because it provides a positive, continuous means of protection and the protection levels can be monitored and compared with industry standards and longstanding guidelines. Currently, there is no other technology that affords this level of protection for

existing buried pipelines. The sacrificial anodes were replaced by impressed current anodes in 2001. The piping sections have also been included in a program for period cathodic protection surveys and monitoring. A review of technologies is provided in Table 4.9-1.

4.10 Protective Wrapping or Coating and Cathodic Protection

The buried piping at the Onshore Facility is existing, therefore the requirements do not apply unless new buried piping is installed. As such, no additional BAT analysis has been conducted.

4.11 Corrosion Surveys

Short sections of piping are buried at the Onshore Facility. Selected sections of the piping were excavated and inspected during a corrosion survey in 1995. The results of the inspection revealed no significant corrosion damage (internal or external) after 27 years' service. Alternate methods include scheduled excavation of the piping for inspection and smart pigging. Scheduled excavation is not considered suitable as it would increase the potential of accidental piping damage. Smart pigging is not compatible with the existing buried piping. The current methods of maintenance for the short sections of buried pipe have proven to be effective; therefore, they are considered BAT for the onshore buried piping. As added protection, sacrificial anodes were installed on the piping sections in 1995 and 1997. The piping sections have also been included in a program for period cathodic protection surveys and monitoring. Monitoring consists of monthly pipe rectifier checks, annual pipe-to-soil potential surveys, and 5-year close-interval potential surveys. Soil resistivity readings were taken in 1995, and indicated that the soils have high resistivity. High resistivity soils tend to be non-corrosive. A review of technologies is provided in Table 4.11-1. (Internal corrosion is monitored by corrosion coupons. Results of the program have revealed insignificant rates of corrosion.)

Table 4.11-1 BAT Analysis: Source Control on Gathering Lines

BAT Evaluation Criteria	(b) (7)(F)	Alternate Method: Patching of Flowlines using a Submersible Device.
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.		Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.		Technology can be transferred.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.		Patching would be an effective means of reducing the volume released from low-pressure leaks from isolated piping.
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.		± \$500,000
AGE AND CONDITON: The age and condition of technology in use by the applicant.		Method is current.
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant		Method is compatible.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.		Method is not feasible because of the tidal conditions in Cook Inlet.
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.		No offsetting environmental impacts.

Table 4.11-2 BAT Analysis: Source Control on Onshore Surge Tanks

BAT Evaluation Criteria	(b) (7)(F)	Alternate Method: None Identified
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.		
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.		
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.		
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.		
AGE AND CONDITON: The age and condition of technology in use by the applicant.		
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant.		
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.		
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.		

Table 4.11-3 BAT Analysis: Source Control on Platform Girder Tanks (Diesel Fuel)

BAT Evaluation Criteria	(b) (7)(F)	Alternate Method: Tank Plugging or Patching
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.		Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.		Technology can be transferred.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.		Technology may not be effective if structural considerations delay or prevent its use.
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.		\$50,000
AGE AND CONDITON: The age and condition of technology in use by the applicant.		Method is more complex and current.
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant.		Method is compatible.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.		Method may not be feasible depending upon structural considerations.
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.		No offsetting environmental impacts.

Table 4.11-4 BAT Analysis: High Liquid Level, Platform A & C Girder Tanks

BAT Evaluation Criteria	(b) (7)(F)	Alternate Method: Automatic Valve Closure
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.		Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.		Technology can be transferred.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.		Additional automation would afford little benefit given the existing filling procedures and requirement of continuous on-site presence of operator during fill operation.
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.		\$15,000 per tank. The operator would still be required to oversee the operation.
AGE AND CONDITON: The age and condition of technology in use by the applicant.		Method is more complex and current.
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant.		Method is compatible.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.		Method is feasible.
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.		No offsetting environmental impacts.

Table 4.11-5 BAT Analysis: Buried Piping Maintenance Practices

BAT Evaluation Criteria	Current System: Cathodic protection with sacrificial anodes, internal corrosion coupons and inspection when excavated.	Alternate Method: Cathodic protection with impressed current anodes, internal corrosion coupons and inspection when excavated.	Alternate Method: Scheduled excavation for inspection of section of all buried steel lines, inspection interval based on previous inspection results.	Alternate Method: "Smart pigging"
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.	In place.	Technology is available.	Technology is available.	Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.	In place.	Technology is transferable.	Technology is transferable.	The technology is not transferable because of configuration of the piping systems.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.	In place.	Positive, continuous method with measurable protection levels. Does not require disturbance of piping. Longstanding history of providing protection.	The method would increase the inspection level of buried piping.	No, because it cannot be adapted to the piping systems.
COST: Cost to the applicant of achieving BAT, including consideration of that cost relative to remaining years of service of technology in use by applicant.	Not applicable.	\$30,000	\$10,000 per year.	High. Extensive piping changes.
AGE AND CONDITON: The age and condition of technology in use by the applicant.	Cathodic protection anodes installed in 1995 and 1997. Systems are under a program to ensure adequate protection.			
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant	In place.	The technology is compatible.	The technology is compatible.	The technology is not compatible with the existing piping.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.	Technology is feasible and frequently used.	Technology is feasible and frequently used.	More excavations are possible, but not around existing structures. Would increase piping	The technology is not feasible with existing piping systems.

Table 4.11-5 BAT Analysis: Buried Piping Maintenance Practices

BAT Evaluation Criteria	Current System: Cathodic protection with sacrificial anodes, internal corrosion coupons and inspection when excavated.	Alternate Method: Cathodic protection with impressed current anodes, internal corrosion coupons and inspection when excavated.	Alternate Method: Scheduled excavation for inspection of section of all buried steel lines, inspection interval based on previous inspection results.	Alternate Method: "Smart pigging"
			damage potential due to increased excavation frequency.	
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.	In place.	None.	Possibly. Would increase potential of accidental damage to piping due to increased frequency of excavations.	Extensive piping systems would be removed for disposal.

Table 4.11-6 BAT Analysis: Corrosion Surveys

BAT Evaluation Criteria	Current System: Corrosion Coupons, Cathodic Protection and Inspection When Excavated	Alternate Method: Scheduled Excavation For Inspection of Section of All Buried Steel Lines, Inspection Interval Based on Previous Inspection Results	Alternate Method: "Smart Pigging"
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.	In place.	Technology is available.	Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.	In place.	Technology is transferable.	The technology is not transferable because of the configuration of the piping systems.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.	In place.	The method would increase the inspection level of buried piping.	No, because it cannot be adapted to the piping systems.
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.	Not applicable	\$10,000 per year.	High. Extensive piping changes.
AGE AND CONDITON: The age and condition of technology in use by the applicant.	The cathodic protection anodes were installed in 1995 and 1997. The systems are under a program to ensure adequate protection.		
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant.	In place.	The technology is compatible.	The technology is not compatible with the existing piping.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.	Technology is feasible and frequently used.	More excavations are possible, but not around existing structures. Would increase the potential of accidental piping damage due to increased frequency of excavations.	The technology is not feasible with existing piping systems.

ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.	In place.	Possibly. Would increase potential of accidental damage to piping due to increased frequency of excavations.	Extensive piping systems would be removed for disposal.
---	-----------	--	---

Table 4.11-7 BAT Analysis: Onshore Surge Tank Leak Detection System [18 AAC 75.425(e)(4)(A)(ii)]

BAT Evaluation Criteria	Current System: Radial Grooves in Concrete slab tank foundation	Alternate Method: Acoustic Monitoring / Ultrasonic Surveys	Alternate Method: Double Floor Construction with interstitial monitoring
AVAILABILITY: Whether technology is best in use in other similar situations or is available for use by applicant.	Existing	Technology is available.	Technology is available.
TRANSFERABILITY: Whether each technology is transferable to applicant's operations.	Existing.	Technology is transferable.	Technology is transferable.
EFFECTIVENESS: Whether there is a reasonable expectation each technology will provide increased spill prevention or other environmental benefits.	Routine facility inspections provide for leak detection. Used in tandem with secondary containment liners this is a highly effective method.	The method would require access to an emptied and cleaned tank for scheduled surveys.	Yes, but would add no additional benefit beyond that currently in use.
COST: The cost to the applicant of achieving BAT, including consideration of that cost relative to the remaining years of service of the technology in use by the applicant.	Not applicable	Not determined. Would be incorporated into 10 year internal inspection.	Not determined. This technology would require equipment maintenance and monitoring costs without additional environmental benefit.
AGE AND CONDITON: The age and condition of technology in use by the applicant.	Installed during 2012 tank upgrade. Technology has been in use for many years.	Used by industry for decades.	Used by industry for decades.
COMPATIBILITY: Whether each technology is compatible with existing operations and technologies in use by the applicant.	Existing	The technology is compatible.	The technology would be require substantial reconstruction of the newly constructed tanks.
FEASIBILITY: The practical feasibility of each technology in terms of engineering and other operational aspects.	Technology is feasible and frequently used.	Technology is feasible but presents a reduced spill prevention benefit due to its periodic application.	The technology is not feasible based upon added maintenance costs, reconstruction costs, with no added environmental benefit.
ENVIRONMENTAL IMPACTS: Whether other environmental impacts of each technology, such as air, land, water pollution and energy requirements, offset any anticipated environmental benefits.	No additional environmental impacts have been identified.	None identified.	None identified.

PART 5 RESPONSE PLANNING STANDARD 5-1

5.1	RELEASES FROM OIL TERMINAL FACILITY	5-1
5.2	RELEASES FROM PRODUCTION FACILITIES.....	5-1
5.3	RELEASES FROM CRUDE OIL PIPELINES	5-2
5.4	RATIONALE FOR CLAIMED PREVENTION CREDITS	5-3

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

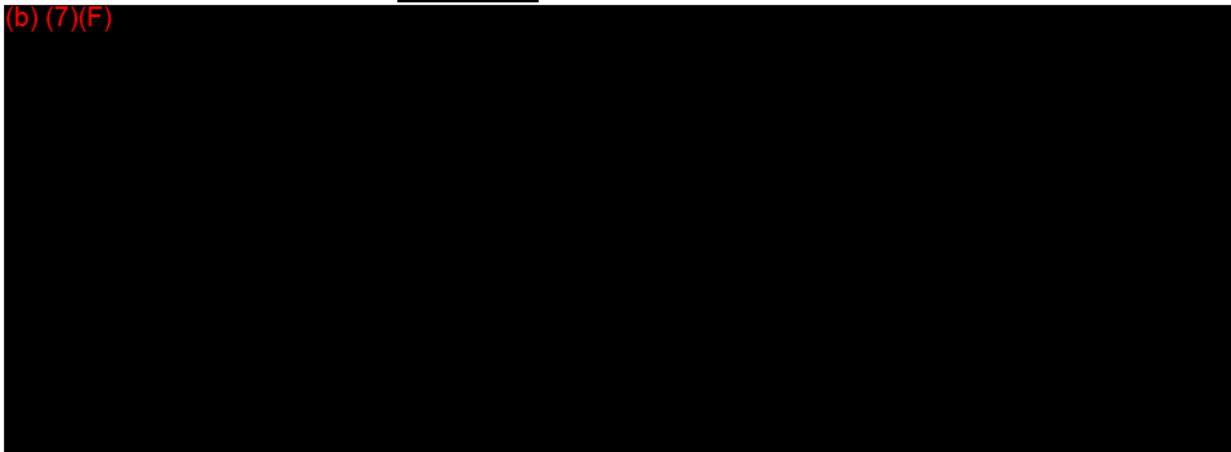
PART 5 RESPONSE PLANNING STANDARD

This section contains the response planning calculations to meet both ADEC and BSEE regulations. XTO is subject to three Response Planning Standards (RPS) as defined by 18 AAC 75.430. Separate standards have been determined for potential releases from the Onshore facility (§75.432), the production wells (§75.434), and crude oil pipelines (§75.436).

5.1 Releases from Oil Terminal Facility

The oil terminal facility consists of (b) (7)(F). There are also two sump tanks, each with a 1,000 bbl capacity. Adjustments used to calculate the worst-case scenario spill volume are allowed by 18 AAC 75.432(d). The RPS volume for the oil storage tanks at the MGS Field onshore facility is (b) (7)(F) crude oil as calculated below.

(b) (7)(F)



5.2 Releases from Production Facilities

The MGS field produces oil with engine/compressor-driven gas lift or hydraulic lift assistance. There is not enough formation pressure to economically push oil to the surface without gas lift or hydraulic lift. No wells on Platform A can flow to surface without the assistance of gas lift or hydraulic lift. Most wells on Platform C cannot flow to surface without gas lift or hydraulic lift; only a few can flow unassisted and these wells only flow at a very low flow rate. XTO Petroleum Engineers have developed a worst-case scenario for the highest producing well at Platform C. It is estimated that in a well control event, the highest producing well at Platform C, would unload about 70 bbl of oil from its tubing in the first day, and then rapidly dissipate in its ability to flow to surface once gas lift support was shut-down to about five (5) bbl of oil per day.

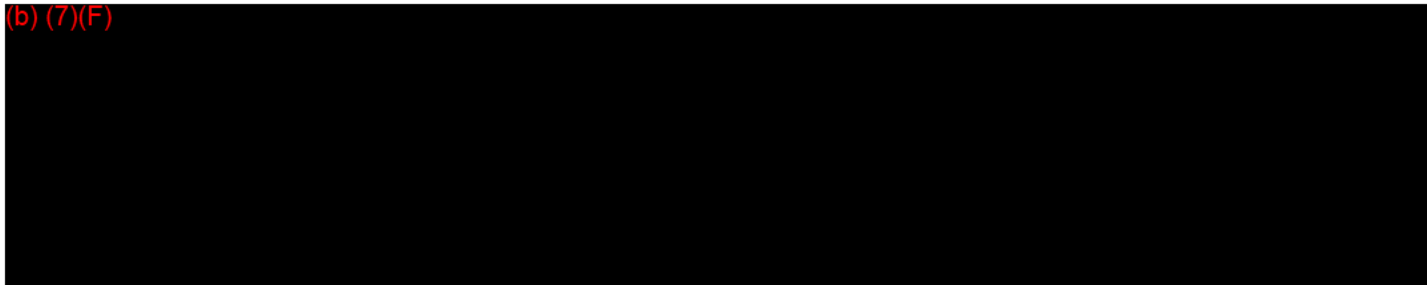
In addition, an enhanced recovery method (waterflooding) is used to force oil through the producing formations. If water flood operations cease, the amount of inflow from the formation would rapidly decline. The probability of sustained long-term flow is virtually zero.

ADEC requires a planholder to assume it will take 15 days to cap a well and BSEE requires a 30-day assumption. The upper estimate of 70 bopd (unassisted flow from the highest producing well) for a 15 day period, equates to (b) (7)(F) of total oil spill potential. The upper estimate of 70 bopd (unassisted flow from the highest producing well) for a 30 day period, equates to (b) (7)(F) of total oil spill potential.

Therefore, the ADEC RPS is (b) (7)(F). The BSEE planning standard for a well is (b) (7)(F). Well control scenarios shown in Part 1, Section 1.6 of the ODP/CP use the higher BSEE planning standard.

BSEE has requested that the total value of the BSEE required worst-case discharge volume be listed in

(b) (7)(F)



5.3 Releases from Crude Oil Pipelines

As described in the Introduction of this Plan, the length of the onshore pipeline is insignificant compared to the length of the offshore pipeline. Based on this, there was only one response-planning standard calculated for the offshore pipeline because a spill from this portion would constitute a worst-case scenario.

The response-planning standard (RPS) for the offshore flowlines was based on the equation in 18 AAC 75.436:

$$\text{RPS volume} = (\text{Lpl} - \text{Hpl}) * \text{Cpl} + \text{FRpl} * (\text{TDpl} + \text{TSDpl})$$

Where:

Lpl	=	pipeline length between pumping or receiving station valves;
Hpl	=	pipeline hydraulic characteristics due to terrain profile;
Cpl	=	pipeline capacity in bbl per linear measure;
FRpl	=	pipeline flow rate in bbl per time period;
TDpl	=	estimated time to detect a spill event; and
TSDpl	=	time needed to shut down the pipeline pump or system.

The results of this calculation without consideration of hydrostatic pressure exerted by the water column are as follows:

Lpl	=	7 miles (mi)
Hpl	=	0
Cpl	=	187 bbl oil per mile
FRpl	=	296 bbl oil per hour (hr)
TDpl	=	20 minutes
TSDpl	=	10 minutes

(b) (7)(F)



However, the actual amount of oil that would leak from the pipeline after shut-in would be limited by the hydrostatic pressure of the water column. Given a higher gradient for seawater than flowline fluid, the maximum flow from the flowline due to gravity will occur for a failure at the shoreline during low tide. If a

pipeline break occurs offshore, the amount of oil displaced by seawater will be minimal, and would be limited to that amount that would leak during equalization of pressure displacement into the riser. The factor H_{pl} would be calculated as follows:

$$H_{pl} = L_{pl} - (L_{nearshore} + L_{platform\ riser})$$

$$H_{pl} = 7\text{ mi} - [(640\text{ ft} + 125\text{ ft}) / (5,280\text{ ft/mi})] = 6.855\text{ mi}$$

(b) (7)(F)

However, for the purposes of preparing an offshore response scenario, the (b) (7)(F) will be utilized in this Plan.

5.4 Rationale for Claimed Prevention Credits

The following programs could result in certain "prevention credits" as allowed by the State of Alaska:

- Alcohol and drug testing of key personnel;
- Operations training programs with professional organizations;
- Online leak detections systems;
- Emergency shutdown valves;
- Sufficiently impermeable secondary containment; and/or
- Cathodic protection.

XTO is requesting a reduced (b) (7)(F) for the surge tank failure scenario only. The reduced RPS is based on the presence, at the MGS facility, of secondary containment designed with cathodic protection, impervious containment, and an outside dike system [18 AAC 75.432(d)(5)].

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

PART 6 References

Alaska Producing Operations Emergency Response Plan. XTO Energy, Kenai, Alaska, latest revision.

API RP 12R1, Recommended Practice for Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service. American Petroleum Institute.

API Specification 12D, Specification for Field Welded Tanks for Storage of Production Liquids. American Petroleum Institute.

API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction. American Petroleum Institute.

Cook Inlet Spill Prevention and Response, Inc. Technical Manual. Cook Inlet Spill Prevention and Response, Inc., Kenai, Alaska, latest revision.

DOT Integrity Management Plan, Alaska Crude Oil Pipeline, XTO Energy, latest revision.

Environmental Sensitivity Index Maps for Cook Inlet. National Oceanic and Atmospheric Administration.

HAZWOPER Compliance Manual. XTO Energy, Kenai, Alaska, latest revision.

Marine Transfer Operations Manual, Platform A. XTO Energy, Kenai, Alaska, latest revision.

Marine Transfer Operations Manual, Platform C. XTO Energy, Kenai, Alaska, latest revision.

Operator Qualification Program, Alaska Operations, XTO Energy, latest revision.

Operations and Maintenance Manual, Alaska MGS Pipeline System, XTO Energy, latest revision.

Process Safety Management, XTO Energy, latest revision.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

APPENDIX A
ICS CONTACT LIST AND ICS ORGANIZATION CHART

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

XTO ENERGY ALASKA / INCIDENT COMMAND SYSTEM / CONTACT LIST

ODPCP Plan - Appendix A
Revision 16

POSITION	CONTACT	WORK	(b) (6)	CELL	FAX	EMAIL
COMMAND STAFF						
Incident Commander	XTO - Scott Griffith	(907) 776-2506		(907) 398-7108	(907) 776-2542	Scott_Griffith@xtoenergy.com
Incident Commander (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Incident Commander (Alternate)	CISPRI - General Manager	(907) 776-5129		*****	*****	*****
Incident Commander (Alternate)	XTO VP – Operations or EHS	*****		*****	*****	*****
Deputy Incident Commander	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Liaison Officer	Witt-Obriens RM	(985) 781-0805		*****	*****	*****
Liaison Officer (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Safety Officer (Initial)	XTO Alaska - Ryan Tunseth	(907) 776-2510		(907) 398-1233	(907) 776-2542	Ryan_Tunseth@xtoenergy.com
Safety Officer (Alternate)	CISPRI - HSE	(907) 776-5129		*****	*****	*****
Safety Officer (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Public Information Officer	XOM - Kim Fox - Pub. Aff. MGR	(907) 564-3628		(907) 230-3530	*****	kim.j.fox@exxonmobil.com
Public Information Officer (Alternate)	XTO - Lisa Winn	(303) 397-3626		(817) 773-3070	*****	Lisa_Winn@xtoenergy.com
PLANNING						
Planning Section Chief	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Planning Section Chief (Alternate)	XTO - Cody Mishler	(907) 776-2560		(907) 398-6960	(907) 776-2542	Cody_Mishler@xtoenergy.com
Situation Unit	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Environmental Unit	XTO - Mike O'Connor	(817) 885-3301		(817) 965-3166	*****	Mike_Oconnor@xtoenergy.com
Environmental Unit (Alternate)	XTO - Ryan Tunseth	(907) 776-2510		*****	*****	*****
Documentation Unit	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
OPERATIONS						
Operations Section Chief	XTO - Steve Phipps	(907) 776-2560		(907) 398-6474	(907) 776-2542	Steve_Phipps@xtoenergy.com
Operations Section Chief (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Operations Section Chief (Alternate)	CISPRI - Operations Manager	(907) 776-5129		*****	*****	*****
LOGISTICS						

XTO ENERGY ALASKA / INCIDENT COMMAND SYSTEM / CONTACT LIST*ODPCP Plan - Appendix A**Revision 16*

Logistics Section Chief	XTO Logistics Coordinator	(907) 776-2587	(b) (6)	(907) 398-8418	(907) 776-2542	tim_griffith@xtoenergy.com
Logistics Section (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
Logistics Section (Alternate)	CISPRI - Logistics	(907) 776-5129		*****	*****	*****
FINANCE						
Finance Section Chief	XTO - Greg Duggin	(907) 776-2540		(907) 398-8473	(907) 776-2542	Greg_Duggin@xtoenergy.com
Finance Section Chief (Alternate)	XTO - Scott Steindorf	(907) 776-2511		(907) 690-3207	(907) 776-2543	Scott_Steindorf@xtoenergy.com
Finance Section Chief (Alternate)	Witt-Obriens RM	(985) 781-0804		*****	*****	*****
WITT-OBRIENS RESPONSE MANAGEMENT						
24 Hour Response	*****	(985) 781-0804		*****	*****	*****
Witt-Obriens Response Management	William Stillings	(907) 550-8526		(907) 223-1544	*****	wstillings@wittobriens.com
COOK INLET SPILL PREVENTION & RESPONSE INC. (CISPRI)						
CISPRI General Manager	Todd Paxton	(907) 776-7401		(907) 398-1901	(907) 776-2190	tpaxton@cisprri.org
CISPRI Operations Manager	Mike Watson	(907) 776-7402		(907) 398-1900	(907) 776-2191	mwatson@cisprri.org
CISPRI Operations Supervisor	Greg Edelman	(907) 776-7406		(907) 398-6502	(907) 776-2192	gedelman@cisprri.org
CISPRI Business Manager	Will Raemaeker	(907) 776-7411		(907) 398-6511	(907) 776-2193	wraemaeker@cisprri.org
CISPRI Logistics Manager	CISPRI	(907) 776-7408		*****	(907) 776-2194	*****
CISPRI Health & Safety	Kevin Petersen	(907) 776-7405		(907) 398-6505	(907) 776-2195	kpetersen@cisprri.org
XTO ENERGY - CENTRAL SUPPORT TEAM						
XTO - President	Randy Cleveland	(817) 885-1660		(817) 583-4577	*****	Randy.J.Cleveland@xtoenergy.com
XTO - Vice President HSE	Nina Hutton	(817) 885-2274		(817) 821-5960	*****	Nina_Hutton@xtoenergy.com
XTO - Vice President Operations (WD)	John Baker	(303) 397-3600		(505) 320-0664	*****	John_Baker@xtoenergy.com
XTO - Legal General Counsel	John Pollio	(817) 885-2313		*****	*****	John_Polio@xtoenergy.com
XTO – VP P&GA	Lindsey Dingmore	(817) 885-2656		(817) 291-8240	*****	Lindsey_Dingmore@xtoenergy.com
XTO - Public & Govt. Affairs (WD)	Lisa Winn	(303) 397-3626		(817) 773-3070	*****	Lisa_Winn@xtoenergy.com
XTO - SR Vice President Land	Win Ryan	(817) 885-2336		*****	*****	Win_Ryan@xtoenergy.com
XTO - Drilling Manager (WD)	Ross Lubbers	(303) 397-3721		(405) 659-8563	*****	Ross_Lubbers@xtoenergy.com

XTO ENERGY ALASKA / INCIDENT COMMAND SYSTEM / CONTACT LIST*ODPCP Plan - Appendix A**Revision 16*

XTO - Drilling Engineer (WD)	Ajibola Adeyeye	(303) 397-3606	(b) (6)	(720) 539-1660	*****	Ajibola_Adeyeye@xtoenergy.com
XTO - Facilities Engineering Director	Shane Alexander	(817) 885-2572		(817) 917-4021	(817) 870-8441	Shane_Alexander@xtoenergy.com
XTO - Senior Facilities Engineer (WD)	Jennifer Hornemann	(303) 397-3640		(720) 879-7972	*****	Jennifer_Hornemann@xtoenergy.com
XTO - HSE Manager (WD)	Martin Nee	(303) 397-3701		(505) 793-6694	*****	Martin_Nee@xtoenergy.com
XTO - Central Safety & Health Manager	Dan Guillotte	(817) 885-2368		(903) 780-5884	*****	Dan_Guillotte@xtoenergy.com
XTO - Central Safety & Health Manager	Lee Romig	(817) 885-1751		(281) 731-5102	*****	Lee_Romig@xtoenergy.com
EXXONMOBIL AK - CENTRAL CONTACTS						
EM - Alaska Public Affairs Manager	Kim Fox	(907) 564-3628		(907) 230-3530	(907) 564-3789	kim.j.fox@exxonmobil.com
EM - Alaska SHE Manager	Irene Garcia	(907) 564-3773		(281) 636-5329	*****	Irene.t.garcia@exxonmobil.com
FACILITIES						
XTO Onshore Facility	N/A	(907) 776-8473		Radio = 901	Radio Frequency (VHF): 153.080	
XTO Platform A	N/A	(907) 776-5241		Radio = 769	Radio Frequency (VHF): 153.080	
XTO Platform C	N/A	(907) 776-5251		Radio = 249	Radio Frequency (VHF): 153.080	

Common Traffic Advisory Frequencies, (CTAF) for the Cook Inlet Area are transmitted VHF. These are used in designated zones by all aircraft operating in that particular zone to exchange position information, and intentions on a common frequency.

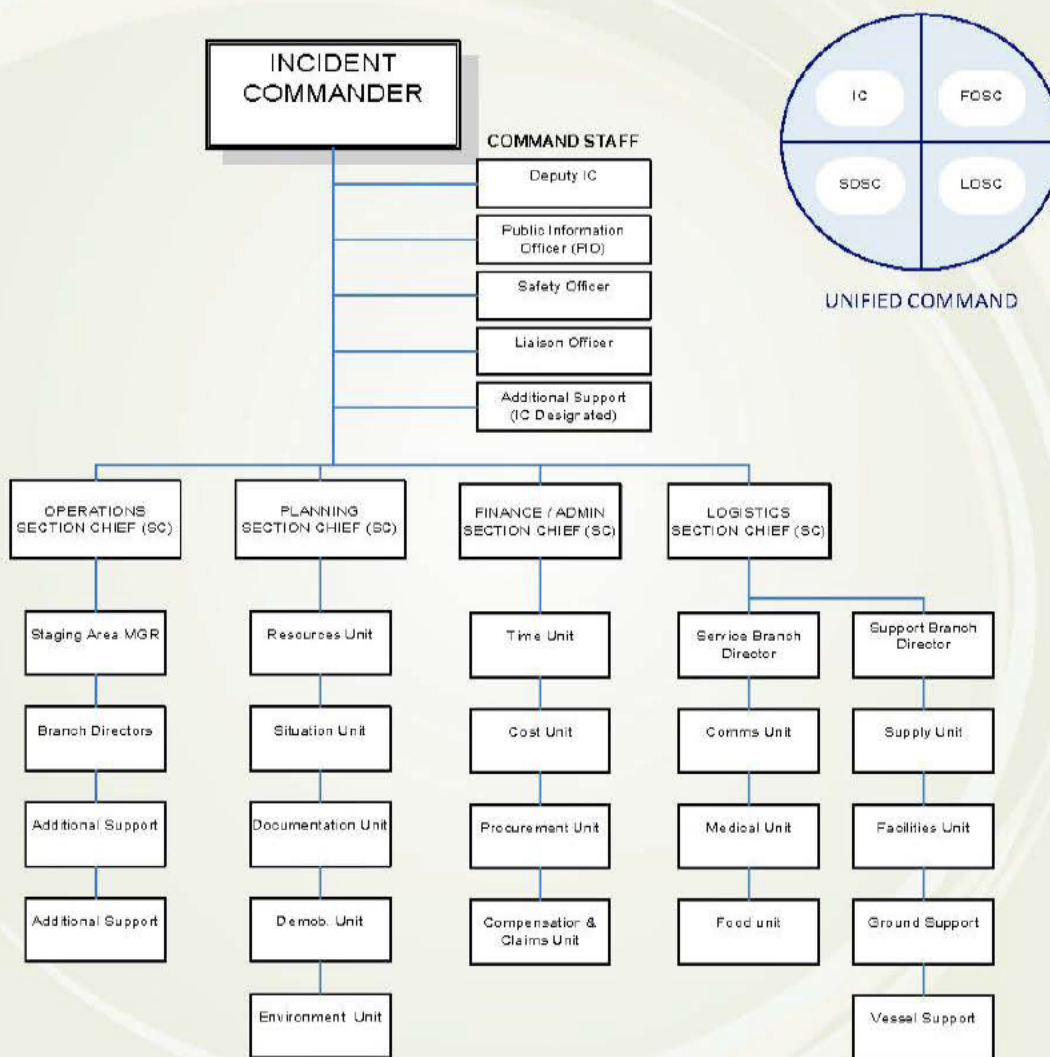
Upper Cook Inlet
VHF - 123.05 AM

Cook Inlet Eastside
VHF - 122.9 AM

Cook Inlet Westside
VHF - 122.7 AM

XTO ALASKA - 24hr Emergency Hotline - (888) 498-6462

XTO ENERGY – ICS Organization Chart (ODPCP Appendix A)



**APPENDIX B
OPA 90 SUPPLEMENT
AND
MATERIAL SAFETY DATA SHEETS (MSDS)**

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

APPENDIX B – OPA 90 SUPPLEMENT

This appendix contains supplemental information required to comply with the facility response plan requirements of the Oil Pollution Act of 1990. The following agencies have jurisdiction over XTO Middle Ground Shoal (MGS) Facilities:

- U.S. Department of Transportation (49 CFR 194): Onshore portions of MGS flowlines.
- U.S. Bureau of Safety and Environmental Enforcement (BSEE)
(30 CFR 254): Platforms and offshore portions of MGS flowlines.

1.0 Statement of Environmental Harm [194.103]

A spill in the MGS facility response zone could cause significant and substantial harm to the environment. The following environmentally sensitive areas could potentially be impacted by a spill from an XTO facility.

- Swamp and Packers Creeks on the east shore of Kalgin Island
- Mouth of the Kasilof River
- Mouth of the Kenai River

The mouth of the Swanson River would be monitored and boomed if oil impact threatened this resource. Since all of these streams support salmon runs, they are considered sensitive throughout the year.

2.0 Worst Case Discharge [194.105]

The MGS facility is defined within one response zone for the purposes of establishing the Worst Case Discharge (WCD) volume under 49 CFR §194.105. The following discussion provides the methodology employed to establish the WCD volume of (b) (7)(F) for the XTO MGS facility.

(b) (7)(F)

The determination of a WCD consistent with the defined methodology of 49 CFR §194.105(b)(2) is based upon a historic pipeline discharge. The MGS spill history, presented in Table 2.2.1, demonstrates that prevention measures employed to mitigate future spills at the facility precludes significant application of this WCD determination methodology.

Established under 49 CFR §194.105(b)(3), the WCD is based upon the single breakout tank volume of 4,916 bbl (reference Table 2.1-2 for specific tank information.) XTO has elected to adjust this WCD volume, applying prevention measure credit as provided for in 40 CFR §194.105(b)(4) as follows:

(b) (7)(F)

3.0 General Requirements [194.107]

3.1 Response to a Substantial Threat of a Worst Case Discharge [194.107(a)]

XTO Energy Inc.'s response strategy for the substantial threat of a worst case discharge is described in Section 1.5 and 1.6 of the XTO MGS facilities ODPCP.

3.2 ACP/NCP Consistency Certification [194.107(c)]

XTO Energy Inc. hereby certifies that it has reviewed the National Oil and Hazardous Substances Pollution Contingency Plan (revised July 1, 2004) and the Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, and the Cook Inlet Subarea Contingency Plan. XTO's ODPCP is consistent with these plans.

4.0 Submission of a State Response Plan [194.109]

This OPA 90 Supplement provides information required to meet 49 CFR Part 194 standards in conjunction with submission of a State of Alaska compliant Oil Discharge Prevention and Contingency Plan.

5.0 Information Summary [194.113]

This plan covers XTO's MGS facilities, which include an onshore production facility and two offshore platforms in Cook Inlet, Alaska operated by:

XTO Energy, Inc.
810 Houston Street
Fort Worth, TX 76102

The primary qualified individual (QI) for the MGS facilities is Scott Griffith, Production Superintendent. Mr. Griffith can be contacted at (907) 776-2506, (907) 398-7108, or (907) 776-3430.

The Alternative QIs for XTO Energy are identified by name and by position as follows:

- Greg Duggin - Production Foreman (907) 776-2540
- Ryan Tunseth, EH&S Manager (907) 776-2510

The qualified individual is available on a 24-hour basis and has full authority to:

- Activate and contract with the oil spill removal organization (CISPRI).
- Activate personnel and equipment.
- Act as a liaison with the On-Scene Coordinators.
- Dedicate funds as required.

The response zone for a worst case discharge includes the flowlines associated with the MGS facilities in Cook Inlet including two offshore oil production platforms and a land-based separation and processing facility on the east side of Cook Inlet near Nikiski. A description of the facility is located in the ODPCP Introduction and Section 3.1.

6.0 Notification Procedures [194.107 (c) (1)(ii)]

XTO Energy Inc.'s notification procedures can be found in Section 1.2 of the XTO ODPCP.

7.0 Drill Procedures

The Senior HS&E Manager schedules drills consistent with the guidelines presented in the National Preparedness for Response Exercise Program (PREP).

7.1 Spill Management Team Tabletop Exercises

One Spill Management Team Tabletop Exercise (TTE) is held each year. Once every three years, the TTE is a WCD scenario. WCD scenarios are described within Section 1 of the ODPCP. A Tabletop drill or exercise is a verbal walkthrough of a spill scenario conducted in a nonemergency mode and is typically a half-day exercise. The focus of the exercise is to review the following:

- Knowledge of the Facility Response Plan
- Notification Procedures
- Communications system and procedures
- Notification and accessibility of CISPRI and their equipment
- Coordination of company personnel with responsibility for spill response
- Effectively coordinate spill response activity with the National Response System Infrastructure
- Ability to access information the Cook Inlet Subarea Contingency Plan for location of sensitive areas, resources available within the Area, unique conditions of Cook Inlet.

7.2 Unannounced Exercises

One unannounced exercise is held each year.

7.3 Oil Spill Removal Organization Equipment Deployment

CISPRI holds at least one equipment deployment drill each year.

7.4 Notification List Revalidation

XTO Notification list is revalidated every six months.

A scenario is developed for each TTE and Unannounced Drill. The scenario includes all the objectives to be met during the exercise. Each QI notification, TTE and Drill is documented and the MGS Unit Production Superintendent or his designee certifies results. The following spill plan components are exercised at least every three years during the exercises.

7.4.1 Organizational Design

- Notification
- Staff mobilization (Alaska staff only)
- Ability to operate within the response management system described in the plan

7.4.2 Operational Response

- Discharge control
- Assessment of discharge
- Containment of discharge
- Recovery of spilled material
- Protection of economically and environmentally sensitive areas
- Disposal of recovered product

7.4.3 Response Support

- Communications
- Transportation
- Personnel support
- Equipment maintenance and support
- Procurement
- Documentation

8.0 Information on Oil Types [194.115(b)]

Material Safety Data Sheets are included on the following pages with information regarding the properties and characteristics of the crude oil handled by XTO facilities.

MSDS Material Safety Data Sheet: CRUDE OIL

Revised: August 19, 2002

SECTION I		CORPORATE IDENTIFICATION	
XTO Energy Inc. 810 Houston Street Fort Worth, TX 76102 Contact number 1-800-299-2800			
SECTION II		PRODUCT INGREDIENT	
<u>Trade Name</u> Crude Oil	<u>CAS Registry No.</u> 8002-05-9	<u>NFPA Hazard Rating</u> (0=Least, 4=Extreme) 2 Health 4 Fire 0 Reactivity	
		<u>U.S. DOT Classification</u> Flammable Liquid	<u>I.D. No.</u> UH1267
SECTION III		HAZARD COMPONENTS	
<u>Chemical Name</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Crude Oil, Petroleum			
Hydrogen Sulfide (may contain)	10 ppm (TWA) STEL - 15 ppm	10 ppm (TWA) STEL - 15 ppm	
Benzene (may contain)	1 ppm (TWA) STEL - 5 ppm	10 ppm (TWA)	
<u>Common Name(s)</u> Crude Oil			
<u>Formula</u> Complex mixture of petroleum hydrocarbons, along with sulfur and nitrogen compounds. May contain hydrogen sulfide and a low percentage of benzene.			
SECTION IV		PHYSICAL AND CHEMICAL CHARACTERISTICS	
<u>Boiling Point</u> Variable, depending on individual crudes	<u>Specific Gravity (H₂O = 1)</u> Variable	<u>Melting Point</u>	
<u>Vapor Pressure</u> Variable, depending on individual crudes	<u>Evaporation Rate (butyl acetate = 1)</u> Variable	<u>% Volatile by Volume</u> Up to 50%	
<u>Vapor Density</u> Heavier than air	<u>Other</u>		
<u>Solubility in Water</u> Insoluble			
<u>Appearance and Odor</u> Dark liquid, sulfur odor			
SECTION V		FIRE AND EXPLOSION HAZARD DATA	
<u>Flash point (method used)</u> 20° - 90° Fahrenheit	<u>Flammable Limits</u> LEL 1% UEL 15%		

SECTION V		FIRE AND EXPLOSION HAZARD DATA (Cont.)		
<u>Extinguish Media</u> Dry chemical, CO ₂ or foam				
<u>Special Fire Fighting Procedures</u> Water may be ineffective, but water should be used to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spills from exposure. Use self-contained, supplied breathing air equipment for enclosed areas of high fume, vapor and/or smoke concentration.				
<u>Unusual Fire and Explosion Hazards</u> High flammable products of combustion may contain CO ₁ , CO ₂ , and other toxic materials. Flammable liquid-vapor may ignite explosively. Do not enter enclosed or confined space without proper protective equipment, including self-contained breathing apparatus (SCBA).				
SECTION VI		REACTIVITY DATA		
<u>Stability</u> Stable				
<u>Conditions to Avoid</u> Exposure to oxidizers, heat, and flame				
<u>Materials to Avoid</u> Strong oxidants like liquid chlorine, concentrated oxygen, sodium, or calcium hypochlorite				
<u>Hazardous Decomposition By-Products</u> Burning may result in sulfur dioxide and sulfur trioxide fumes, smoke, carbon monoxide, and carbon dioxide				
<u>Hazardous Polymerization</u> Will not occur				
SECTION VII		HEALTH HAZARD DATA		
<u>Route(s) of Entry:</u>	<u>Inhalation?</u> Yes	<u>Skin?</u> Yes	<u>Ingestion?</u> Yes	
<u>Health Hazards (Acute and Chronic)</u> Inhalation or high concentrations of vapors may have results ranging from eye and respiratory irritation, dizziness and headaches to unconsciousness depending on concentration and length of exposure. Prolonged or repeated liquid contact with skin will dry and defat the skin leading to skin irritation, dermatitis, and an increased possibility of skin cancer. Crude oil greater than 700 ppm, with increased loss of consciousness and subsequent death. Light hydrocarbons may contain low percentages of benzene. Benzene may cause leukemia and other blood diseases after prolonged or repeated exposures at high concentrations.				
<u>Carcinogenicity:</u>	<u>NTP</u> Benzene Yes	<u>IARC Monographs</u> Yes	<u>OSHA Regulated</u> Yes	<u>ACGIH</u> Yes
Crude oils and especially heavier crude oil fractions with high-boiling aromatics have increased the incidence of skin cancer in laboratory tests where mice were painted over their lifespan without washing between applications.				

SECTION VII HEALTH HAZARD DATA (continued)	
<u>Signs and Symptoms of Exposure</u>	
Irritation to eyes, lungs or skin after prolonged or repeated exposure. Over exposure may cause central nervous system depression. Hydrogen sulfide can cause pulmonary edema and respiratory paralysis at high concentrations.	
<u>Medical Conditions Generally Aggravated by Exposure</u>	
Vapor, if inhaled, will cause dizziness, difficult breathing or loss of consciousness.	
<u>Emergency and First Aid Procedures</u>	
Eyes	Immediately flush with water for 15 minutes, seeking medical attention.
Inhalation	Remove to fresh air immediately. Artificial respiration necessary if breathing stops.
Skin	Remove contaminated clothing and wash skin thoroughly with soap and water. If irritation persists, seek medical attention. Launder contaminated clothing before reuse and discard extremely contaminated leather products.
Ingestion	DO NOT induce vomiting. Seek medical attention immediately.
SECTION VIII PRECAUTION FOR SAFE HANDLING AND USE	
<u>Steps To Be Taken in Case Material Is Released or Spilled</u>	
Remove all ignition sources. Keep people away. Recover free liquid. Add absorbent material to spill area. Minimize the breathing of vapors. Ventilate confined spaces. Open windows and doors. Keep petroleum products out of sewers, watercourses, or extensive land areas. Federal, state, or local regulations must be followed.	
<u>Waste Disposal Method</u>	
Recycle as much of the recoverable product as possible. Lawfully dispose of absorbent material, assuring conformity with applicable disposal regulations.	
<u>Precautions To Be Taken in Handling and Storing</u>	
Observe precautions for volatile, flammable vapors from absorbed materials. Toxic quantities of hydrogen sulfide may be present in storage tanks and bulk transport vessels which contain or have contained crude petroleum. Persons opening or entering these compartments should first determine if hydrogen sulfide is present. Do not attempt to rescue without wearing approved supplied air or self-contained breathing equipment.	
<u>Other Precautions</u>	
Wash thoroughly with soap and water after contact. Avoid ignition sources.	
SECTION IX CONTROL MEASURES	
<u>Respiratory Protection (specify type)</u>	
Use supplied air or self-contained breathing equipment in confined or enclosed spaces.	

SECTION IX	CONTROL MEASURES (continued)
<u>Ventilation</u>	
Local Exhaust	Ventilate to avoid accumulation of explosive vapors.
Special	No smoking or open lights.
Mechanical	
General	Use explosion-proof equipment and non-sparking tools in areas where explosive vapors may form.
Other	N/A
<u>Protective Gloves</u>	
	Use chemically resistant gloves to avoid skin contact.
<u>Eye Protection</u>	
	Goggles or face shields for spray/mist or if splashing possible. A full face piece if respiratory protection is required for hydrogen sulfide.
<u>Other Protective Clothing or Equipment</u>	
	Use chemical-resistant apron or other clothing if needed to avoid contaminating regular clothing.
<u>Work/Hygienic Practices</u>	
	Keep containers closed when not in use. Do not handle or store near heat, sparks, flame, or strong oxidants. Ventilation must be sufficient to prevent build up of toxic or explosive concentration of vapor in air.
	Wash before eating, smoking, or drinking.
	Soiled clothing should be removed and laundered.
For additional information on health effects contact: XTO Energy Inc., Environmental and Safety Department, 810 Houston Street, Fort Worth, Texas 76102, (817) 870-2800.	
The information contained herein is based on the data available to XTO Energy Inc. and is believed to be correct. However, XTO Energy Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. XTO Energy Inc. assumes no responsibility for injury from the use of the product described herein.	

Material Safety Data Sheet

Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)

NFPA: Flammability



HMIS III:

HEALTH	1
FLAMMABILITY	2
PHYSICAL	0

0 = Insignificant, 1 = Slight, 2 = Moderate,
3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)		
Synonyms	:	CARB Diesel, 888100004478		
MSDS Number	:	888100004478	Version	: 2.17
Product Use Description	:	Fuel		
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259		
Tesoro Call Center	:	(877) 783-7676	Chemtrec (Emergency Contact)	: (800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Regulatory status	: This material is considered hazardous by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).
Signal Word	: WARNING
Hazard Summary	: Toxic. Combustible Liquid

Potential Health Effects

Eyes	: Eye irritation may result from contact with liquid, mists, and/or vapors.
Inhalation	: Vapors or mists from this material can irritate the nose, throat, and lungs, and can cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.
Skin	: Skin irritation leading to dermatitis may occur upon prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed. Long-term, repeated skin contact may cause skin cancer
Ingestion	: Harmful or fatal if swallowed. Do NOT induce vomiting. This material can irritate the mouth, throat, stomach, and cause nausea, vomiting, diarrhea and restlessness. Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe

MATERIAL SAFETY DATA SHEET	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)	Page 2 of 10
-----------------------------------	---	--------------

lung damage, respiratory failure and even death.

Target Organs : Central nervous system, Eyes, Skin, Kidney, Liver

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	100%
Nonane	111-84-2	0 - 5%
Naphthalene	91-20-3	0 - 1%
1,2,4-Trimethylbenzene	95-63-6	0 - 2%
Xylene	1330-20-7	0 - 2%
Sulfur	7704-34-9	15 ppm maximum

SECTION 4. FIRST AID MEASURES

Inhalation	: Move to fresh air. Give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.
Skin contact	: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Wash contaminated clothing before re-use. If skin irritation persists, seek medical attention immediately.
Eye contact	: Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes. If symptoms persist, seek medical attention.
Ingestion	: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Seek medical attention immediately.
Notes to physician	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Disorder, Vomiting, Lung edema, Aspiration may cause pulmonary edema and pneumonitis, Liver disorders, Kidney disorders.

SECTION 5. FIRE-FIGHTING MEASURES

Form	: Liquid
Flash point	: 38 °C Minimum for #1 Diesel, 52 °C Minimum for #2 Diesel
Auto Ignition temperature	: 257 °C (495 °F)
Lower explosive limit	: 0.6 %(V)
Upper explosive limit	: 4.7 %(V)
Suitable extinguishing media	: Carbon dioxide (CO ₂), Water spray, Dry chemical, Foam, Keep containers and surroundings cool with water spray.
Specific hazards during fire	: Fire Hazard Do not use a solid water stream as it may scatter and spread fire. Cool

MATERIAL SAFETY DATA SHEET	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)	Page 3 of 10
-----------------------------------	---	--------------

fighting	closed containers exposed to fire with water spray.
Special protective equipment for fire-fighters	: Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.
Further information	: Exposure to decomposition products may be a hazard to health. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to contain spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact. Ensure adequate ventilation. Use personal protective equipment.
Environmental precautions	: Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	: Take up with sand or oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

SECTION 7. HANDLING AND STORAGE

Handling	: Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.
Advice on protection against fire and explosion	: Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initiated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha). (3) Storage tank level floats must be effectively bonded.

MATERIAL SAFETY DATA SHEET	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)	Page 4 of 10
-----------------------------------	---	--------------

For more information on precautions to prevent static-initiated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Dust explosion class	: Not applicable
Requirements for storage areas and containers	: Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".
Other data	: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.
Advice on common storage	Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m ³
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m ³
ACGIH	Diesel Fuel	68476-30-2	TWA	100 mg/m ³
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Nonane	111-84-2	TWA	200 ppm

Engineering measures	: Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.
Eye protection	: Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.
Hand protection	: Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for further information.
Skin and body protection	: If needed to prevent skin contact, chemical protective clothing such as of DuPont

MATERIAL SAFETY DATA SHEET**Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)**

Page 5 of 10

	TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.
Respiratory protection	: A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.
Work / Hygiene practices	: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and laundry before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Liquid
Appearance	: Clear, straw colored
Odor	: Characteristic petroleum (kerosene) odor
Flash point - typical	: 38 °C Minimum for #1 Diesel, 52 °C Minimum for #2 Diesel
Auto Ignition temperature	: 257 °C (495 °F)
Thermal decomposition	: No decomposition if stored and applied as directed.
Lower explosive limit	: 0.6 %(V)
Upper explosive limit	: 4.7 %(V)
pH	: Not applicable
Freezing point	: No data available
Boiling point	: 148 - 372 °C(298 - 702 °F)
Vapor Pressure	: < 2 mm Hg at 20 °C
Density	: 0.86 g/cm ³
Water solubility	: Negligible
Viscosity, dynamic	: 1.7 - 40 mPa.s at 37.8 °C (100.0 °F)

MATERIAL SAFETY DATA SHEET	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)	Page 6 of 10
-----------------------------------	---	--------------

Percent Volatiles	: 100 %	
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	Diesel Fuel Oils at terminal load rack: Ultra Low Sulfur Diesel (ULSD) without conductivity additive: ULSD at terminal load rack with conductivity additive: conductivity may decrease from environmental factors such as temperature drop. JP-8 at terminal load rack:	At least 25 pS/m 0 pS/m to 5 pS/m At least 50 pS/m but 150 pS/m to 600 pS/m

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers. Viton ® ; Fluorel ®
Materials to avoid	: Strong oxidizing agents. Peroxides
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and noncombusted hydrocarbons (smoke). Diesel exhaust particulates may be a lung hazard - see Section 11.
Thermal decomposition	: No decomposition if stored and applied as directed.
Hazardous reactions	: Keep away from oxidizing agents, and acidic or alkaline products.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity

NTP	: Naphthalene (CAS-No.: 91-20-3)
IARC	: Naphthalene (CAS-No.: 91-20-3)
OSHA	: No component of this product which is present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by OSHA.
CA Prop 65	: WARNING! This product contains a chemical known to the State of California to cause cancer. naphthalene (CAS-No.: 91-20-3)
Skin irritation	: Irritating to skin.
Eye irritation	: Irritating to eyes.
Further information	: Studies have shown that similar products produce skin cancer or skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. Positive mutagenicity results have been reported. Repeated over-exposure may cause liver and kidney injury IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

Component:

Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rabbit
---	------------	--

MATERIAL SAFETY DATA SHEET**Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)**

Page 7 of 10

		Dose: 2,001 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat
		Dose: 7.64 mg/l
		Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		Result: Severe skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes.
		Result: Mild eye irritation
Nonane	111-84-2	<u>Acute oral toxicity:</u> LD50 mouse
		Dose: 218 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat
		Exposure time: 4 h
Naphthalene	91-20-3	<u>Acute oral toxicity:</u> LD50 rat
		Dose: 2,001 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rat
		Dose: 2,501 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat
		Dose: 101 mg/l
		Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		Result: Mild skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes.
		Result: Mild eye irritation
		<u>Carcinogenicity:</u> N11.00422130
1,2,4-Trimethylbenzene	95-63-6	<u>Acute inhalation toxicity:</u> LC50 rat
		Dose: 18 mg/l
		Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		Result: Skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes.
		Result: Eye irritation
Xylene	1330-20-7	<u>Acute oral toxicity:</u> LD50 rat
		Dose: 2,840 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rabbit
		Dose: ca. 4,500 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat
		Dose: 6,350 mg/l
		Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin.
		Result: Mild skin irritation
		Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
		<u>Eye irritation:</u> Classification: Irritating to eyes.
		Result: Mild eye irritation

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as

MATERIAL SAFETY DATA SHEET	Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)	Page 8 of 10
-----------------------------------	---	--------------

information applicable, under Federal and State regulations.

Component:

Naphthalene	91-20-3	<u>Toxicity to algae:</u> EC50 Species: Dose: 33 mg/l Exposure time: 24 h
1,2,4-Trimethylbenzene	95-63-6	<u>Toxicity to fish:</u> LC50 Species: Pimephales promelas (fathead minnow) Dose: 7.72 mg/l Exposure time: 96 h <u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia Dose: 3.6 mg/l Exposure time: 48 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name : DIESEL FUEL
 UN-No. : UN1202 (NA 1993)
 Class : 3
 Packing group : III

TDG

Proper shipping name : DIESEL FUEL
 UN-No. : UN1202 (NA 1993)
 Class : 3
 Packing group : III

IATA Cargo Transport

UN UN-No. : UN1202 (NA 1993)
 Description of the goods : DIESEL FUEL
 Class : 3
 Packaging group : III
 ICAO-Labels : 3
 Packing instruction (cargo aircraft) : 366
 Packing instruction (cargo aircraft) : Y344

IATA Passenger Transport

UN UN-No. : UN1202 (NA 1993)
 Description of the goods : DIESEL FUEL
 Class : 3
 Packaging group : III

MATERIAL SAFETY DATA SHEET**Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)**

Page 9 of 10

ICAO-Labels	: 3
Packing instruction (passenger aircraft)	: 355
Packing instruction (passenger aircraft)	: Y344
IMDG-Code	
UN-No.	: UN 1202 (NA 1993)
Description of the goods	: DIESEL FUEL
Class	: 3
Packaging group	: III
IMDG-Labels	: 3
EmS Number	: F-E S-E
Marine pollutant	: No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid
Moderate skin irritant
Moderate eye irritant
Toxic by ingestion
POSSIBLE CANCER HAZARD

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA III US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

<u>Components</u>	<u>CAS-No.</u>
-------------------	----------------

Xylene	1330-20-7
--------	-----------

1,2,4-Trimethylbenzene	95-63-6
------------------------	---------

Naphthalene	91-20-3
-------------	---------

PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

<u>Components</u>	<u>CAS-No.</u>
-------------------	----------------

Nonane	111-84-2
--------	----------

MATERIAL SAFETY DATA SHEET**Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)**

Page 10 of 10

Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
xylene	1330-20-7
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6
MASS RTK	US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)
<u>Components</u>	<u>CAS-No.</u>
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Naphthalene	91-20-3
Nonane	111-84-2
NJ RTK	US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
<u>Components</u>	<u>CAS-No.</u>
Nonane	111-84-2
Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6
California Prop. 65	: WARNING! This product contains a chemical known to the State of California to cause cancer.
	Naphthalene 91-20-3

SECTION 16. OTHER INFORMATIONFurther information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Template : GWU mbH
 Prepared by Birlenbacher Str. 18
 D-57078 Siegen
 Germany
 Telephone: +49-(0)271-88072-0
 01/27/2011

65, 66, 295

MSDS Material Safety Data Sheet: CONDENSATE

Revised: August 19, 2002

SECTION I CORPORATE IDENTIFICATION			
XTO Energy 810 Houston Street Fort Worth, TX 76102 Contact number 1-800-299-2800			
SECTION II PRODUCT INGREDIENT			
<u>Trade Name</u> Condensate	<u>CAS Registry No.</u> 64741-47-5	<u>NFPA Hazard Rating U.S. DOT Classification</u> (0=Least, 4=Extreme) Flammable gas 2-Health 4-Fire 0-Reactivity	<u>I.D. No.</u> UN 1203
SECTION III HAZARD COMPONENTS			
<u>Chemical Name</u> Hydrocarbons (aromatic and paraffinic)	<u>OSHA PEL</u>	<u>ACGIH TLV</u> 300 ppm (TWA)	<u>Other Limits</u> N/A
Benzene (may contain)	1 ppm (TWA) STEL - 5 ppm	10 ppm (TWA)	
Hydrogen Sulfide (may contain)	10 ppm (TWA) STEL - 15 ppm	10 ppm (TWA) STEL - 15 ppm	
<u>Common Name(s)</u> Casinghead Gasoline			
<u>Formula</u> Complex mixture of petroleum hydrocarbons, along with sulfur and nitrogen compounds. May contain hydrogen sulfide and a low percentage of benzene.			
SECTION IV PHYSICAL AND CHEMICAL CHARACTERISTICS			
<u>Boiling Point</u> -20° to 600°F		<u>Specific Gravity (H₂O = 1)</u> 0.6 - 0.8	
<u>Vapor Pressure</u> 200-500 mm Hg.		<u>Melting Point</u>	
<u>Vapor Density</u> >1		<u>Evaporation Rate (butyl acetate = 1)</u>	
<u>Solubility in Water</u> Insoluble		<u>% Volatile by Volume</u> Variable	
<u>Appearance and Odor</u> May vary from a clear, colorless liquid to a dark viscous liquid. Odor may range from mild, pleasant hydrocarbon odor to pungent, offensive or strong sulfurous odor.			
SECTION V FIRE AND EXPLOSION HAZARD DATA			
<u>Flash point (method used)</u> +50°F (PMCC)		<u>Flammable Limits</u> LEL 1% UEL 8%	
<u>Extinguish Media</u> Dry chemical, CO ₂ , or foam			
<u>Special Fire Fighting Procedures</u> Water may be ineffective, but water should be used to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spills from exposure. Use self-contained breathing air equipment for enclosed areas or high fume, vapor, and/or smoke concentration.			

SECTION V		FIRE AND EXPLOSION HAZARD DATA (Continued)	
<u>Unusual Fire and Explosion Hazards</u> Highly flammable products of combustion may contain CO, CO ₂ , and other toxic materials. Flammable liquid-vapor may ignite explosively. Do not enter enclosed or confined space without proper protective equipment including self-contained breathing apparatus (SCBA).			
SECTION VI		REACTIVITY DATA	
<u>Stability</u> Stable	<u>Hazardous Polymerization</u> Will not occur.		
<u>Conditions to Avoid</u> Exposure to oxidizers	<u>Conditions to Avoid</u> Heat and flame		
<u>Materials to Avoid</u> Strong oxidants such as liquid chlorine, concentrated oxygen, sodium, or calcium hypochlorite.			
<u>Hazardous Decomposition By-Products</u> Burning may result in sulfur dioxide and sulfur trioxide fumes, smoke, carbon dioxide, and carbon monoxide.			
SECTION VII		HEALTH HAZARD DATA	
<u>Route(s) of Entry:</u>	<u>Inhalation?</u> Yes	<u>Skin?</u> Yes	<u>Ingestion?</u> Yes
<u>Health Hazards (Acute and Chronic)</u> Inhalation or high concentrations of vapors may have results ranging from eye and respiratory irritation, dizziness, and headaches to unconsciousness depending on concentration and length of exposure. Prolonged or repeated liquid contact with skin will dry and defat the skin leading to skin irritation, dermatitis, and an increased possibility of skin cancer. Crude oil may contain hydrogen sulfide gas. Breathing may stop after a few seconds of exposure to hydrogen sulfide concentrations greater than 700 ppm, with increased loss of consciousness and subsequent death. Light hydrocarbons may contain low percentages of benzene. Benzene may cause leukemia and other blood diseases after prolonged or repeated exposures at high concentrations.			
<u>Carcinogenicity:</u> NTP Benzene	Yes	<u>IARC Monographs</u> Yes	<u>OSHA Regulated</u> Yes <u>ACGIH</u> Yes
Crude oils and especially heavier crude oil fractions with high-boiling aromatics have increased the incidence of skin cancer in laboratory tests where mice were painted over their lifespan without washings between applications.			
<u>Signs and Symptoms of Exposure</u> Irritation to eyes, lungs, or skin after prolonged or repeated exposure. Over exposure may cause CNS depression. Hydrogen sulfide can cause pulmonary edema and respiratory paralysis at high concentrations.			
<u>Medical Conditions Generally Aggravated by Exposure</u> Vapor, if inhaled, will cause dizziness, difficult breathing, or loss of consciousness.			
<u>Emergency and First Aid Procedures</u>			
Eyes	Immediately flush with water for 15 minutes, seeking medical attention.		
Inhalation	Remove to fresh air immediately. Artificial respiration necessary if breathing stops.		
Skin	Remove contaminated clothing and wash skin thoroughly with soap and water. If irritation persists, seek medical attention. Launder contaminated clothing before reuse and discard extremely contaminated leather products.		
Ingestion	DO NOT induce vomiting. Seek medical attention immediately.		
SECTION VIII		PRECAUTION FOR SAFE HANDLING AND USE	

Steps To Be Taken in Case Material Is Released or Spilled

Remove all ignition sources. Keep people away. Recover free liquid. Add absorbent material to spill area. Minimize the breathing of vapors. Ventilate confined spaces. Open windows and doors. Keep petroleum products out of sewers and watercourses or extensive land areas. Federal, state, and local regulations must be followed.

Waste Disposal Method

Recycle as much of the recoverable product as possible. Lawfully dispose of absorbed materials, assuring conformity with applicable disposal regulations.

Precautions to Be Taken in Handling and Storing

Observe precautions for volatile, flammable vapors from absorbed materials.

Toxic quantities of hydrogen sulfide may be present in storage tanks and bulk transport vessels which contain or have contained crude petroleum. Persons opening or entering these compartments should first determine if hydrogen sulfide is present. Do not attempt to rescue without wearing approved supplied air or self-contained breathing equipment.

Other Precautions

Wash thoroughly with soap and water after contact. Avoid ignition sources.

SECTION IX**EMPLOYEE PROTECTION****Respiratory Protection (specify type)**

Use supplied air or self-contained breathing equipment in confined or enclosed spaces.

Ventilation

Local Exhaust Ventilate to avoid accumulation of explosive vapors.

Special No smoking or open lights.

Mechanical

General

Use explosion-proof equipment and non-sparking tools in areas where explosive vapors may form.

Other

N/A

SECTION IX**EMPLOYEE PROTECTION (continued)****Protective Gloves**

Use chemically resistant gloves to avoid skin contact.

Eye Protection

Goggles or face shields for spray/mist or if splashing possible. A full face piece if respiratory protection is required for hydrogen sulfide.

Other Protective Clothing or Equipment

Use chemical-resistant apron or other clothing if needed to avoid contaminating regular clothing.

Work/Hygienic Practices

Keep containers closed when not in use. Do not handle or store near heat, sparks, flame, or strong oxidants. Ventilation must be sufficient to prevent build-up of toxic or explosive concentration of vapor in air. Wash before eating, smoking, or drinking. Soiled clothing should be removed and laundered.

For additional information on health effects contact: XTO Energy Inc., Environmental and Safety Department, 810 Houston Street, Fort Worth, Texas 76102, (817) 870-2800.

The information contained herein is based on the data available to XTO Energy Inc. and is believed to be correct. However, XTO Energy Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. XTO Energy Inc. assumes no responsibility for injury from the use of the product described herein.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**

MSDS NATURAL GAS

Revised: August 8, 2002

SECTION I		CORPORATE IDENTIFICATION	
XTO Energy 810 Houston Street Fort Worth, TX 76102 Contact number 1-800-299-2800			
SECTION II		PRODUCT INGREDIENT	
<u>Trade Name</u>	<u>CAS Registry No.</u>	<u>NFPA Hazard Rating</u> (0=Least, 4=Extreme)	<u>U.S. DOT Classification</u> <u>I.D. No.</u>
Natural Gas	8006-14-2	2-Health 4-Fire 0-Reactivity	
SECTION III		HAZARD COMPONENTS	
<u>Chemical Name</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Aliphatic Hydrocarbon		800 ppm (TWA)	
Hydrogen Sulfide (may contain)	20 ppm (TWA) STEL - 50 ppm	10 ppm (TWA) STEL - 15 ppm	
Benzene (may contain)	1 ppm (TWA) STEL - 5 ppm	10 ppm (TWA)	
<u>Common Name(s)</u>	<u>Formula</u>		
Well Head Gas	C ₁ -C ₈		
SECTION IV		PHYSICAL AND CHEMICAL CHARACTERISTICS	
<u>Boiling Point</u> -258°F	<u>Specific Gravity (H₂O = 1)</u> Gas		
<u>Vapor Pressure</u> 5000 PSI @ 100°F	<u>Melting Point</u> -297°F		
<u>Vapor Density</u> 55-75 @ 60°F	<u>Evaporation Rate (butyl acetate = 1)</u> Gas		
<u>Solubility in Water</u> Negligible	<u>% Volatile by Volume</u> 100%		
<u>Appearance and Odor</u> Clear, colorless, may have distillate odor or sulphur odor.	<u>Other</u>		
SECTION V		FIRE AND EXPLOSION HAZARD DATA	
<u>Flash point (method used)</u> -306°F to -211°F	<u>Flammable Limits</u> LEL 3.8-6.5% UEL 13-17%	<u>Auto Ignition</u>	
<u>Extinguish Media</u> Dry chemical, CO ₂ , water spray (fog) for dispersing vapor			
<u>Special Fire Fighting Procedures</u> Do not extinguish unless gas source is shut off. Approach from upwind, water spray (fog) may be used to disperse vapors. Breathing protection may be required if there is a hydrogen sulfide exposure.			

SECTION V FIRE AND EXPLOSION HAZARD DATA (continued)				
<u>Unusual Fire and Explosion Hazards</u> Natural Gas presents an extreme fire hazard. Gas forms mixture with air which can explode violently on contact with any source of ignition.				
SECTION VI REACTIVITY DATA				
<u>Stability</u> Stable		<u>Hazardous Decomposition By-Products</u> CO, CO ₂ , and possibly SO ₂		
<u>Conditions to Avoid</u> Spark, flames, heat		<u>Hazardous Polymerization</u> Will not occur		
<u>Materials to Avoid</u> Strong oxidizers				
SECTION VII HEALTH HAZARD DATA				
<u>Route(s) of Entry:</u>	<u>Inhalation?</u> Yes	<u>Skin?</u> No	<u>Ingestion?</u> Not likely	
<u>Health Hazards (Acute and Chronic)</u> Acute: Asphyxiant displacing oxygen				
<u>Carcinogenicity:</u>	<u>NTP</u> NA	<u>IARC Monographs</u> NA	<u>OSHA Regulated</u> NA	<u>ACGIH</u> NA
<u>Signs and Symptoms of Exposure</u> Inhalation: Signs and symptoms which precede asphyxia may include rapid respiration, loss of mental alertness and coordination, dizziness, nausea, and vomiting. Continued exposure may result in unconsciousness, convulsion, coma, and death.				
<u>Medical Conditions Generally Aggravated by Exposure</u> Persons with respiratory disorder may have symptoms aggravated.				
<u>Emergency and First Aid Procedures</u>				
Inhalation	Remove to fresh air immediately. Begin artificial respiration if not breathing.			
Eyes	Flush with water. If irritation persists, seek medical attention.			
SECTION VIII PRECAUTION FOR SAFE HANDLING AND USE				
<u>Steps To Be Taken in Case Material Is Released or Spilled</u> Evacuate the area, remove all sources of ignition, disperse vapors with water spray. Stay upwind.				
<u>Waste Disposal Method</u> Preferred method of disposal is burning as a vapor in a properly designed flare. Special care must be taken to ensure complete dissipation of gas below explosive limit.				
<u>Precautions To Be Taken in Handling and Storing</u> Keep away from heat and sparks.				
<u>Other Precautions</u> Hydrogen sulfide should be considered.				
SECTION IX EMPLOYEE PROTECTION				
<u>Respiratory Protection (specify type)</u> Should there be hydrogen sulfide present, self-contained breathing apparatus (SCBA) is appropriate.				
<u>Ventilation</u>				

Local Exhaust Ventilate to avoid accumulation of explosive vapors.
Special No smoking or open lights.

Mechanical
(General) Use explosion-proof equipment and non-sparking tools in areas where explosive vapors may form.
Other N/A

Protective Gloves
None normally required.

Eye Protection
None normally required.

Other Protective Clothing or Equipment
Normal work clothes

Work/Hygienic Practices
Anyone entering an unknown atmosphere with potential leaks, should monitor the area for combustible vapors and hydrogen sulfide.

For additional information on health effects contact: XTO Energy Inc., Environmental and Safety Department, 810 Houston Street, Fort Worth, Texas 76102, (817) 870-2800.

The information contained herein is based on the data available to XTO Energy Inc. and is believed to be correct. However, XTO Energy Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. XTO Energy Inc. assumes no responsibility for injury from the use of the product described herein.

**THIS PAGE
INTENTIONALLY
LEFT BLANK**