

**COOK INLET  
SUBAREA CONTINGENCY PLAN**

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*Note: These Scenarios were not revised or updated during the December 2010 Administrative Update.*

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## SCENARIOS: INTRODUCTION

In preparing the spill scenarios, the following topics were taken into consideration:

### A. SPILL HISTORY

The spill history from the files of the NOAA Scientific Support Coordinator, which should encompass all spills of significance, provided the reference points for spill scenarios. The focus is only on significant and large spill events. This listing does not take into account the entire database of spills prepared by ADEC for the region, and small spills that had little or no anticipated environmental impact are not included in the Scientific Support Coordinator's files. (A brief synopsis of the Subarea spill history is provided in the Background Section, Part Three.)

### B. HAZARD ASSESSMENT

The majority of vessel spills occur due to a combination of bad weather and equipment failure. Mariners operating in good weather and with properly-maintained equipment do not typically experience difficulties. Physical hazards in the lower Inlet are concentrated near Kennedy Entrance where the coastline is rocky and the high winds and seas generated in the Gulf of Alaska can prove difficult. Anchoring at the entrance to Cook Inlet would be extremely difficult due to the rugged coastline and depth of water. The rest of the Inlet differs from the area surrounding the entrance because the water depth and bottom type often allow adequate anchoring. However, in the winter, problems associated with ice increase in the upper Inlet.

A Coast Guard study is currently underway that will address the requirements for escort vessels in areas other than Prince William Sound. One aspect the study will consider is the adequacy of anchoring in Cook Inlet. Strong tidal currents in the inlet complicate anchoring. In addition, tugs are not available to assist vessels docking at the Nikiski terminal or to assist those experiencing mechanical difficulties. Any substantial tug assistance for a vessel in distress would have to come from the Anchorage area.

The State of Alaska commissioned the 1991 Study of Non-crude Tank Vessels and Barges by Arthur D. Little, Inc. This study provides detailed summaries of the relative risks of spills, hazards, and fuel quantities transported.

### C. VULNERABILITY ANALYSIS

The region supports abundant and diverse wildlife populations. Specific information on resources at risk is contained in the Sensitive Areas Section. Resources are used for private pleasure, for subsistence, and for commercial purposes. Tourists, charter tour companies, and recreational users all benefit from this diversity and abundance of wildlife in the area. The region supports a large commercial and sport fishing industry. A significant spill could affect all those individuals who depend on the region's resources for food, financial gain, or enjoyment. In addition, spills can potentially affect the integrity of whole ecosystems.

Historical properties and cultural sites important to the prehistory of the region could also be negatively affected by a spill. Potential effects of spills are not limited to the initial impact of oil, since the response methods used to mitigate a spill can be more detrimental to resources than the spill itself. Therefore, appropriate response techniques need to be considered in relation to sensitive resources.

**D. RISK ASSESSMENT**

Tank vessel traffic within Cook Inlet is relatively low. However, traffic is expected to increase, pending anticipated future oil exploration, development and production. There are approximately 180 tanker port calls to Cook Inlet facilities each year. Tank vessel traffic for 1992 was:

FACILITY	PORT CALLS	PRODUCT
Port of Anchorage	15	Refined petroleum products
Cook Inlet Pipeline	32	Cook Inlet crude
Kenai Pipeline Co.	48	North Slope crude (in)
Kenai Pipeline Co.	25	Residual oils (out)
Phillips Petroleum	35	Liquefied natural gas
Unocal	25	Anhydrous ammonia

Cook Inlet traffic also includes several thousand fishing vessel, pleasure craft and charter vessel transits. Other significant vessel traffic includes:

Barges (tank barge and cargo barge)	port calls - 252
Freight Vessels	port calls - 239

**E. SEASONAL CONSIDERATIONS**

The seasonal characteristics affect both the risk of spills as well as the risk to resources. The ice that forms in the Inlet during the winter months causes problems to vessels transiting the Inlet. Greater power is required to overcome the force of the tidal current in addition to the force of the drifting ice. Vessels must time their arrivals and departures based on the tides, especially if they do not have sufficient power to overcome the tides and ice. Vessels not equipped to operate in ice-laden waters have experienced difficulty in transiting the Inlet.

In winter, response personnel are placed in a position of elevated risk due to the environmental hazards. Collecting and recovering oil in the Inlet's current, already a difficult task, becomes more difficult when ice is present. Spill response would be more difficult because of the freezing temperatures and the ice in the water.

Although some risks decrease as the weather warms, more vessels are actively fishing, commercially and recreationally. The heightened vessel activity increases the risk of a vessel spill. Resource sensitivity increases in the summer due to the influx of migratory birds as well as returning salmon and other wildlife. The Sensitive Areas Section of this plan covers the times of year that are most critical for the wildlife that exist in the region.

## SCENARIOS: PART ONE - COASTAL OIL

### A. WORST CASE SCENARIO

**Size of the Discharge:** A tank vessel's entire cargo of 380,000 barrels of North Slope crude oil.

**Event Description:** The Tank Vessel (T/V) Cook Inlet experiences a boiler failure causing a complete loss of power. The T/V Cook Inlet drifts onto Perl Rock on the south side of Perl Island. Over the next four days the vessel breaks apart on the rocks causing a total loss of cargo at Kennedy Entrance.

**Location:** Approximate position- Latitude 59° 06'N; Longitude 151° 41'W. Perl Rock is located at the entrance to Cook Inlet on the south side of Perl Island. The location is marked with USCG-maintained aid to navigation.

**Spill:** The total cargo load, 380,000 barrels of North Slope crude, is released over a four-day period. This is a Trans Alaska Pipeline System (TAPS) trade vessel that loaded cargo at the Alyeska Terminal in Valdez, Alaska for discharge to Tesoro via the KPL facility in Nikiski, Alaska.

**Cargo Salvage:** Over a four-day period the hull was totally compromised with the entire cargo contents released. Salvage options were evaluated in the event that weather would abate and allow lightering to commence. The vessel is considered a total loss.

**Date:** 15 April

**On-scene Weather:** Winds: SW @ 40 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40 °F

**Sensitive Areas at Risk:** Specific information on resources at risk can be extracted from the Sensitive Areas Section in consultation with the resource trustees. From a general viewpoint, resources in the area that may be placed at risk immediately are seals, sea lions, otters, diving birds, anadromous fish, birds of prey, land mammals (deer and bear), and shellfish. Elizabeth Island, Perl Island, and East Chugach Island all provide habitat for harbor seals. Both Elizabeth Island and Nagahut Rocks have haulouts frequented by Steller sea lions. Bald eagles nest on the islands as well as the mainland and can be negatively impacted by consuming oiled carrion. The Barren Islands, in the path of the spill, are home to all of the previously mentioned wildlife as well as numerous shorebirds and diving birds. Lower Cook Inlet provides numerous resources for commercial, sport, and subsistence users. Any significant spill in this area would negatively affect all users of the Inlet over the short term.

The shoreline geomorphology in the immediate vicinity of the spill is exposed rocky shores. Sand and gravel beaches, exposed wave-cut platforms and sheltered tidal flats can be expected to be impacted from this spill in the early stages due to their proximity to the spill event. The impacts of a spill of this volume are far reaching and would affect a large area. An extensive, coordinated effort between trustee agencies would be necessary to develop a comprehensive approach to environmental impact abatement. The Sensitive Areas Section provides a framework for accomplishing this task. Communities that would most likely be affected are English Bay (Nanwalek), Port Graham, Seldovia, and Homer. In addition, all Kodiak Island communities through Shelikof Straits and out to Cold Bay and Unimak Pass would be impacted by a spill of this magnitude.

#### **Initial Action Description:**

1. Notification (Assume the responsible party has notified the required agencies in accordance with the vessel response plan)

FOSC will notify the following:

- \*\* ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
- \* ADNR
- \* ADF&G
- \* ADES
- \*\* CGD17 OPCEN, to activate support resources including:
  - District (m), District Office, Marine Safety Division
  - DRG, District Response Group
  - DRAT, District Response Advisory Team
  - PIAT, Public Information Assist Team
  - RRT, Regional Response Team
- \*\* NRC, National Response Center
- \*\*\* NOAA SSC, Scientific Support Coordinator
- \*\* NSFCC, National Strike Force Coordinating Center
- \*\* NPFC, National Pollution Fund Center
- \*\*\* Local Emergency Managers of any impacted/threatened communities
- \*\*\* Kenai Peninsula Borough
- \*\*\* Kodiak Island Borough
- \*\*\* Cook Inlet RCAC

Key: \* = Notification initiated by State  
\*\* = Message notification  
\*\*\* = Notification by FOSC

## 2. Response Activation

Commence with notification of all involved parties per the Response Section, providing initial situation assessment. Be brief, concise and provide specific spill information including exact location, quantity spilled, potential threat, and whether product is still being released.

Ensure that Responsible Party (RP) is notified and responding.

Dispatch representatives to the scene at the earliest opportunity.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Request immediate helicopter support from USCG Air Station Kodiak through D17 OPCEN to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated. Request USCG cutter support from Homer through D17 OPCEN. Cutter can provide initial on scene platform.

Commence activation/movement of in-house resources (State and Federal).

Draft POLREP (USCG) and SITREP (ADEC) and distribute.

3. Initial On-Scene Investigation, Inspection, Evaluation & Recommendations

Gather information from overflights, crew reports, video recordings and any other reliable source to document scene and develop initial response strategy.

Have investigation team immediately conduct drug testing of the vessel's crew and conduct interviews to determine cause of incident.

Determine cargo and fuel capacities. Contact last port if immediate cargo amounts are unknown.

Collect charts and log books for evidence.

Determine cargo salvage options and lightering potential.

Issue Notice of Federal Interest and Letter of State Interest.

Evaluate slick size, direction of travel, weather, area of coverage, proximity to shore, wildlife areas and potential impacts, and other relevant information that might affect response decisions.

Establish direct communication with the Unified Command Center if it is established in the field. If no Unified Command Center is established in the field, consider using USCG MSO Anchorage conference room as the initial Command Post while USCG/ADEC personnel are enroute to Nikiski Command Center.

4. Initial Response Actions

Secure the source, if possible.

Develop containment/booming plan for implementation as weather abates.

Establish Unified Command Post at earliest opportunity. Plan for remote command post locations in Homer and Kodiak.

Place fire fighting resources on standby in the event fire breaks out. Resources outside the state will likely be required in the event of fire.

Take actions to stabilize the vessel. Notify USCG Marine Safety Center of vessel information and situation. Request stability information.

Evacuate any injured personnel or unnecessary crew members.

Evacuate crew for drug testing if possible.

Complete notification procedures. Include up-channel notification to include the RRT, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.

Develop joint goals and objectives with the RP/State/USCG.

Issue Notice to Mariners restricting vessel traffic in the immediate vicinity of the incident.

Issue Notice to Airmen, through the FAA, restricting aircraft traffic in the immediate vicinity of the incident.

Ensure preparation of Site Safety Plan.

Prepare initial press release jointly with the Unified Command.

Inform local government entities that may be affected.

Consider alternatives to mechanical response: dispersant application, *in situ* burning, or destruction of entire vessel and cargo by burning.

Schedule routine overflights of area. Request USCG support in developing an aviation operations plan for the spill to control air traffic in the area.

Prioritize areas for exclusion booming, protective booming, and shoreline cleanup.

In consultation with trustee agencies, determine requirements for wildlife protection.

Evaluate RP's capability to carry out an appropriate response.

Utilize SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making recovery impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

## 5. Spill Response Organization

Establish command structure as prescribed in the Unified Plan, Annex B. The **Unified Plan** describes the Unified Command concept and provides organizational diagrams for several different situations. A spill of this magnitude could be declared a Spill of National Significance (SONS). The roles and responsibilities of the SONS structure are also identified in the **Unified Plan, Annex B**. The pre-designated FOOSC for the region becomes the Area Operations Coordinator. The SONS incident continues as a Unified Command response. The fact that an incident is declared a SONS does not indicate that the response has been poorly managed or that anyone has performed poorly. The escalation of an incident into a SONS is intended to make more resources and personnel available for the response.

A Liaison Officer will be assigned to act as a sounding board for landowners, leaseholders, affected interest groups that have no jurisdictional authority, and other interested parties. Community representation during spill response will be directed through the liaison officer and thence to the Unified Command.

6. Containment Countermeasures and Cleanup Strategies

Secure the source, if possible.

Stabilize the vessel through the best means available; fuel transfer, lightering, etc.

Reduce the pollution potential by removing fuel from the vessel at the earliest opportunity.

Boom the vessel at the earliest opportunity, pending favorable weather.

If mechanical cleanup is not feasible or adequate, consider alternatives of *in situ* burning or dispersants.

Organize Shoreline Cleanup Assessment Teams in preparation for shoreline surveys.

Ensure the wildlife protection plan is in place and trustee agencies are working closely with RP to ensure minimum impact to resources in area.

Ensure that trustee agencies with responsibility for determining the requirement for implementation of a Federal/State Natural Resource Damage Assessment (NRDA) are notified that wildlife may be affected. The lead trustee will then coordinate the NRDA separate from the response and with funds provided by the NPFC.

Request NOAA to provide spill tracking and trajectory modeling to determine present location and path of spill. Consider spill tracking/surveillance systems; the University of Alaska Fairbanks' Synthetic Aperture Radar facility, USCG Forward Looking Infrared Radar equipped aircraft, and USCG Side Looking Airborne Radar are potential resources.

7. Resource Requirements

a. Equipment: Quick deployment of high volume oil recovery vessels and other mechanical collection equipment is essential to ensure success of the response and to mitigate spill damage. A spill of this size would require all area response equipment in a joint coordinated cleanup effort.

b. Skimmers:

(1) CISPRI's vessel/skimming systems must be immediately deployed from Nikiski, weather permitting. The vessels should arrive on scene with all equipment prepared for immediate deployment. CISPRI vessel/skimming systems presently include:

<u>Vessel</u>	<u>System</u>	<u>Capacity(bbls/hr)</u>
BANDA SEAHORSE	Transrec 200	1257
LAFAYETTE	Desmi ocean	607
CHAMPION	Foxtail	534
RESOLUTION	Lori side collection	742
MUSTANG ISLAND	Desmi ocean	607

(2) SERVS: Given the volume of this spill scenario, it is anticipated that skimming systems will be immediately requested from Alyeska/SERVS in Prince William Sound and deployed to the spill area. (Mutual Aid Agreements between the major spill response

Co-Ops are addressed in the shortfalls section of this scenario. Releasing equipment designated for a regulatory response requirement in one area to be used in a response in a different area is also addressed in the shortfalls section.) The vessels should arrive on-scene with all equipment prepared for immediate deployment:

<u>Vessel</u>	<u>System</u>	<u>Capacity</u>
VALDEZ STAR	Dynamic inc. plane	2000bbls/hr
PIONEER SERVICE	Vikoma SS50 (2)	385bbls/hr
FREEDOM SERVICE	Vikoma SS50 (2)	385bbls/hr
HERITAGE SERVICE	Vikoma SS50 (2)	385bbls/hr
LIBERTY SERVICE	Vikoma SS50 (2)	385bbls/hr
CONSTITUTION SERV.	Vikoma SS50 (2)	385bbls/hr
GLACIER	Desmi ocean	607
FOX RIVER	Desmi 250	485
VRCA Flexifloat	Transrec 250	1571
VRCA Flexifloat	Desmi 250	485

OFFSHORE STORAGE:

<u>Barge</u>	<u>Capacity</u>	<u>Additional Info</u>
*ZPC-401	112,000bbls	Transrec 250 skimmer
*SATCO	12,000bbls	Acquisition approved by CISPRI
**450-8	135,000bbls	2 Transrec 350-2100bbls/hr ea
**ENERGIZER	73,000bbls	
**JI344	73,800bbls	2 Transrec 350-2100bbls/hr ea
**Z-BIG 1	110,700bbls	2 Transrec 350-2100bbls/hr ea
**UT-10	77,000bbls	2 Transrec 350-2100bbls/hr ea

\* CISPRI      \*\*SERVS

Both companies also have a variety of bladders and smaller barges for near shore deployment as well as portable tanks for shoreside temporary storage.

(3) The Alaska Responder 650 (a barge staged out of Seldovia) is a 650-barrel (27,300-gallon) aluminum barge with 500 feet of boom and a rope mop skimming device. The barge will respond with pre-contracted vessels of opportunity.

- c. Boom: Alaska has one of the largest inventories of boom in the entire nation. Booms of all varieties and sizes can be found in nearby areas. Fire boom for *in situ* burning applications is also in local inventories. Exclusionary and deflection booms and associated mooring and anchoring equipment are available in local inventories.
- d. Vessels of Opportunity: Both CISPRI and SERVS have a large vessel of opportunity fleet. Vessels range in size and construction from landing craft (both large and small), fishing vessels (variety of sizes and horsepower), and numerous other vessels from charter boats for personnel transportation to skiffs for near shore response. CISPRI and SERVS fishing vessel fleets are experienced in boom deployment and have considerable local knowledge. A ready fleet of response vessels experienced in pollution operations meeting HAZWOPER requirements is located throughout the lower Inlet area. Kodiak, English Bay, Port Graham, Homer, Kenai, and Seldovia all have sizable vessel of opportunity fleets. Seldovia SOS has a response structure to dispatch and support local vessel operations and maintains an immediate call out list of qualified vessels and personnel. An available armada of response vessels exists with great potential to benefit

- a spill response if properly supported and managed effectively.
- e. Personnel: Initial personnel activation, outside of the CISPRI personnel, will require several hours to days. The Cook Inlet region, unlike much of the state, does have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities. Both CISPRI and SERVS have spent considerable time training fishing vessel crews and primary response personnel in HAZWOPER and field deployment exercises.

## 8. Resource Availability and Resource Procurement

CISPRI is the primary responder in this scenario. For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (USCG, State of Alaska, ACC, CISPRI, ACS, SERVS) that would allow the resources of SERVS and ACS to be brought into the response. This assumption does not imply that such agreements are currently in place or that such agreements would be reached. MSRC and NAVSUPSALV are potential resources that could be available for this scenario, if proper agreements could be reached that are acceptable to the involved parties. All these response Co-Ops have highly organized management teams knowledgeable in the ICS structure and routinely exercise their roles as responders. A communications network is already in place and available for immediate usage.

Procuring the resources identified in this spill response is the RP's responsibility. A spill of this magnitude would quickly cost in excess of \$1 million each day. Committing this volume of funds in a short time is essential. Failure, on the part of the RP, to quickly settle accounts payable can quickly force local businesses out of business. Experience acquired during past spills has shown that funds must be processed at a much higher than normal rate to maintain the response. The Oil Spill Liability Trust Fund is available to the FOSC in the event the RP is unable or unwilling to pay the costs of the spill response.

## 9. Shortfalls

- a. Equipment: A major shortfall in equipment could be expected if the response cooperatives, the State, and the USCG can't develop agreements that will allow all response resources of these groups to be brought to bear. The issues include, but are not limited to, liability, financial arrangements, release form regulatory requirements, and rules for operating facilities with less than the required response equipment. The lack of agreements in place could hinder a response effort that exceeds the capability of an individual response cooperative. No regulatory requirement exists that mandates such mutual aid agreements.

Lighterage for skimmed product is always a consideration when determining the adequacy of a response. Lighterage capability has increased dramatically over the last four years. Part of the lighterage concerns can't be answered without a determination as to whether or not decanting will be allowed and can be planned as part of the response. Fire fighting capability for this scenario is extremely limited. Resources to fight a fire in this scenario would have to be brought from outside the region.

- b. Personnel (logistical/training problems):
  - (1) Housing - ATCO style housing unit and housing barges are required to augment response. Several organizations in Alaska cater "field camp" setups which include housing and feeding facilities. These facilities are available in flyaway form and as

floating hotels. Most of these field camps are idle during the winter months in this region of Alaska. But, during the time frame for this scenario, a majority of the available facilities could be previously committed and unavailable for the spill response.

(2) Food - Catering services for field personnel would likely be procured coincidentally with the remote housing units. Catering for response personnel not deployed to the field could be handled using resources within the region.

(3) Fuel - Several fuel facilities are located throughout the area including Port Graham, Seldovia, Homer, Nikiski and Kodiak. These facilities would be required to supply the numerous vessels operating in the area. Fuel is not expected to be a shortfall.

(4) Transportation: Commercial airports located in the immediate vicinity of the spill area can provide adequate logistics supply points. The road network along the Kenai Peninsula will support the logistics chain in delivering equipment to pickup points in Homer, Kenai, Anchorage, and Seward. The equipment must then be transported overwater. The overwater portion of the supply chain will likely be the weakest link.

- c. Funding: Funds availability and access should pose no problem regardless of the financial capabilities of the RP. If funding problems arise, the FOSC has access to the Oil Spill Liability Trust Fund and procedures are in place to make these funds available. The SOSC, in the event of a State funded response, has access to the 470 Fund and procedures are in place to make these funds available as well.

If the spill is "federalized," problems have been identified regarding the payment of accounts due. The response organizations will likely be unable financially to expend the amounts of money anticipated if reimbursement occurs on a 30 day payout. Ten days, as a maximum, has been discussed as the period when receipts must be paid. Failure to pay in this time period could result in a collapse of the logistical supply line, and therefore the response. Federal contracting personnel must evaluate this requirement and determine a feasible solution.

- d. Minimum Response Times: Estimates indicate that the RP could have response personnel and equipment on scene within six hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the sea state and weather in the Gulf of Alaska as well as whether the responders are running with the tide or against.

## 10. Spill Cleanup Timetable

The on-water spill response will continue until all recoverable oil is collected or the fall/winter weather forces a halt in operations due to personnel safety. Operations may continue through September depending on weather, specifically the onset of winter storms. Shoreline cleanup will begin as soon as possible after beaches are oiled. The shoreline cleanup can then be expected to resume as soon as spring weather will allow. The number of years required to terminate cleanup operations depends heavily upon the efficiency of the initial on-water response.

## 11. Disposal Options

Debris disposal is the responsibility of the RP. The volume of oil contaminated debris will

exceed the disposal capability of the region, unless on-site disposal methods are approved by the appropriate agencies. The RP must present a disposal plan to appropriate agencies along with necessary permits for the requested disposal plan. Disposal options for debris are limited in Alaska.

Information on waste streams and typical waste products that will be generated during a response is contained in this Subarea plan in the Response Section, Part Two and in the Unified Plan, Annex E, Appendix II. This scenario will generate a very large volume of fuel contaminated equipment and recovered product. The remoteness of the region will complicate disposal and elevate the costs of handling and transportation. The availability of shipping and storage facilities make it difficult to comply with the time frames contained in hazardous waste handling regulations. The task of managing waste disposal must be approached aggressively and very early in the response. Facility/vessel owners must investigate and identify potential staging areas for contaminated debris and equipment. Also, areas designated for cleaning contaminated equipment must be able to handle the contaminated runoff.

12. Cleanup Termination

Termination of cleanup should be a joint decision by the Unified Command based on the following criteria:

- a. There is no longer any detectable oil present on the water, on adjoining shorelines, or in places where it is likely to reach the water again; or
- b. Further removal operations would cause more environmental harm than the oil to be removed; or
- c. Cleanup measures would be excessively costly in view of their insignificant contribution to minimizing a threat to the public health or welfare, or the environment; and
- d. Activities required to repair unavoidable damage resulting from removal actions have been performed.

## **B. MAXIMUM MOST PROBABLE CASE SCENARIO**

**Size of the Discharge:** A wellhead blowout discharge of 5500 bbls/day for an indeterminate length of time.

**Event Description:** Granite Point Platform experiences a wellhead blowout resulting in an uncontrolled release.

**Location:** Approximate position of platform is Latitude 60° 57.43'N; Longitude 151° 19.54'W, in the vicinity of Trading Bay.

**Spill:** The initial rate of release estimated at 5500 bbls/day of Cook Inlet crude oil.

**Date:** 1 September

**On-Scene Weather:** Winds: SW @ 15kts; Sea State: 3 ft; Temp = 45 °F

**Sensitive Areas at Risk:** Specific information on resources at risk can be extracted from the Sensitive Areas Appendix in consultation with the resource trustees. From an overview perspective, resources in the area that may be immediately placed at risk include the migratory waterfowl using the Trading Bay State Game Refuge during their migration south. Exposed tidal flats due west of the platform support shellfish and the marshes adjoining the flats are home to several species of diving birds and shorebirds. Anadromous fish will still be active in the Inlet and the streams and rivers flowing into the Inlet at this time of year. Several of these streams are in the immediate vicinity of the oil. Harbor seal haulouts are noted along the West Foreland, to the southwest of the platform. Kalgin Island, further downstream of the platform to the southwest, is listed as a Critical Habitat Area by the State and supports anadromous fish streams, shellfish populations, and harbor seals as well as a waterfowl nesting and staging area. Oil spilled in the Inlet would affect numerous resources in the area and a coordinated effort among the responders, the resource trustees, and the government agencies would be required to mitigate the impacts of a spill of this magnitude. Most of the resources of the Inlet are used for subsistence purposes by numerous groups. The area is also heavily fished by commercial and sport fishers.

### **Initial Action Description:**

#### 1. Notification

Same as WORST CASE SCENARIO.

#### 2. Response Activation

Commence with notification of all involved parties per Annex H, providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, quantity spilled, potential threat, currently leaking or not, etc.

Ensure that Responsible Party (RP) is notified and responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOOSC's Historic Properties Specialist.

Request immediate helicopter support from USCG Air Station Kodiak through D17OPCEN to conduct overflights of platform. RP may have helicopters available that can land on the platform. Also, helicopter support may be required if platform must be evacuated and evacuation by vessel is not feasible. Risk of fire and explosion must be evaluated due to the release of natural gas accompanying the crude oil release.

Request USCG cutter support from Homer through D17 OPCEN. Cutter can provide initial on-scene platform.

Commence activation/movement of in-house resources (State and Federal).

Draft POLREP (USCG) and SITREP (ADEC) and distribute.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of platform crew.

Attempt to make initial determination of cause of blowout.

Ensure contact with MMS personnel to draw on expertise in offshore platforms.

Establish Safe Zone around platform until proper safety evaluation completed.

Evaluate slick size, direction, area of coverage, proximity to shore, weather, wildlife observed in area and possible impacts.

Determine what response actions have occurred or are underway.

Issue Notice of Federal Interest and Letter of State Interest to RP.

### 3. Initial Response Actions

Stabilize the platform if required.

Evacuate personnel if required.

Complete notification process.

Activate the response structure to the level deemed necessary (This scenario would not appear to be considered a Spill of National Significance and would likely be handled at the local FOSC's level. Although a 60 day discharge of 5000 bbls/day would equate to a 300,000 bbl spill, the time frame of the spill and the fact that the trajectory shows the oil traveling along the coastline but not seriously impacting the shoreline immediately would likely not make this a SONS.)

Ensure notification of resource trustees using Emergency Notification Checklist.

Establish interim local (Anchorage) command post while individuals are enroute to field

command post in Nikiski.

Evaluate the capability of RP to carry out an appropriate response given the situation.

Issue Notice To Mariners.

Prepare Initial POLREP (USCG).            Prepare Initial SITREP (State).

Instruct RP to develop *in situ* burning plan for consideration and to begin marshaling resources for burning activity, if such actions are not already underway.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

#### 4. Spill Response Organization

Establish command structure as described in the Unified Plan, Annex B. This spill may be considered a Spill of National Significance (SONS). See the previous Worst Case Scenario for information on the SONS spill response organization. Even if this spill does not attain SONS status, it can be expected that the pre-designated FOSC will continue this role.

#### 5. Containment, Countermeasures, and Cleanup Strategies

Highest concern is securing the source, either through drilling a relief well or allowing the blowout well to naturally seal. The FOSC, SOSC, and RP discuss the advantages and disadvantages of both options. Well flow stabilization and decline depends upon geology and reservoir characteristics and, because of the complexity, cannot usually be predicted.

Following an initial inspection, the RP indicates that flow may be halted via surface intervention in approximately 2 weeks. However, a contingent plan for drilling a relief well is developed and the RP is requested to brief Unified Command on the aspects and time frame for this plan. Adequate time remains to drill a relief well during this season. After review of plan, the RP is instructed to initiate actions required to drill a relief well.

FOSC authorizes burning as a response option after receiving RRT approval of the RP's *In Situ* Burning request, in accordance with the *In Situ* Burning Guidelines already in place. The RP secures an open air burn permit from the State and makes ready to begin collecting and burning oil in accordance with response plan. FOSC authorizes dispersant application after reviewing RP's dispersant application request. The location of this spill is in a Zone 1 (pre-approved) dispersant use zone. Mechanical containment and recovery of oil in the upper portion of Cook Inlet is extremely difficult and dependent on weather, tides, and currents. Oil spilled in Cook Inlet quickly breaks into stringers oriented with the current. Convergence zones can quickly pull

oil under the surface only to resurface further down current. A large volume of debris is carried in the waters of Cook Inlet which will become oiled, making recovery difficult. It is imperative that the response to this spill utilize all available options to quickly remove as much oil as possible. Continue mechanical recovery as long as practicable and reasonably successful.

FOSC requests support from the University of Alaska Fairbanks, Synthetic Aperture Radar facility in tracking the oil slick. As daylight decreases rapidly, periods of low cloud cover make visual airborne reporting sporadic.

If shoreline impact appears imminent, direct RP to implement shoreline protection measures/cleanup techniques of the RP response plan.

Resource trustees coordinate with the RP planning staff to ensure that wildlife concerns are properly addressed.

Agency and organization concerns that can't be resolved at the lower levels of the command structure are elevated to the Unified Command for resolution.

6. Resource Requirements

Same As WORST CASE SCENARIO.

7. Resource availability and resource procurement

Same As WORST CASE SCENARIO.

8. Shortfalls

- a. Equipment: A shortfall in equipment for this scenario is not anticipated in the early stages of the response. If the oil flow continues for an extended period, equipment may be sought from the other response cooperatives. The response cooperatives, the USCG, and the State must come to an agreement over several issues regarding the release of equipment from other areas. The issues include, but are not limited to, liability, financial arrangements, release form regulatory requirements, and rules for operating facilities with less than the required response equipment. Lighterage for skimmed product is always a consideration when determining the adequacy of a response. Lighterage capability has increased dramatically over the last four years. Part of the lighterage concerns can't be answered without a determination as to whether or not decanting will be allowed and can be planned.

Always at issue in the Cook Inlet scenarios is the capability of recovery equipment to operate effectively in the fast-flowing waters. Recovery of oil in the Inlet has proved difficult in the past and no great strides have been made in the technology surrounding mechanical recovery.

- b. Personnel (Logistical/training problems): Same As WORST CASE SCENARIO.

9. Spill Cleanup Timetable

This spill response/cleanup will continue until the fall/winter weather forces a halt in operations

due to personnel safety. The shoreline cleanup can be expected to resume as soon as spring weather will allow. The number of years required to terminate cleanup operations depends heavily upon the efficiency of the initial response.

10. Disposal options

Same As WORST CASE SCENARIO.

11. Cleanup Termination

Same As WORST CASE SCENARIO.

### C. AVERAGE MOST PROBABLE CASE SCENARIO

**Size of the Discharge:** About 50 bbls of diesel fuel.

**Event Description:** During fuel transfer operations from a vessel to shore, a valve fails. Fuel is released directly into Cook Inlet.

**Location:** Pickworth Dock, Port of Anchorage.

**Spill:** Approximately 50 bbls of diesel fuel are spilled before the lines can be secured.

**Date:** 15 March

**On-scene Weather:** Winds: W@10kts; Sea State: 30% coverage, open pack ice; Temp = 35 °F

**Sensitive Areas at Risk:** Specific information on resources at risk can be extracted from the Sensitive Areas Appendix in consultation with the resource trustees. From an overview perspective, resources in the area that may be immediately placed at risk are rather limited at this time of year. Gulls and terns begin arriving around this time of the year and inhabit the marshes and sheltered tidal flats in the vicinity of the dock. Two anadromous fish streams are in close proximity to the facility and, although no salmon would be in the area, they would be arriving within about six weeks. Shorelines in the area vary from coarse grained sand beaches to sheltered tidal flats.

#### **Initial Action Description:**

1. Notification

Same As WORST CASE SCENARIO.

2. Response Activation

Commence with notification of all involved parties, providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, quantity spilled, potential threat, currently leaking or not, etc.

Ensure that responsible party (RP) is notified and responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Draft POLREP (USCG) and SITREP (ADEC) and distribute.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of all responders.

Establish Safe Zone around spill area to prevent explosion, if necessary.

Evaluate slick size, direction, area of coverage, proximity to shore, wildlife impacts, wildlife observed in area, on-scene weather, etc.

Determine what response actions have occurred or are underway.

Issue Notice of Federal Interest and State Interest to RP.

### 3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Activate the response structure to the level deemed necessary.

Deploy containment equipment/sorbent boom.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post not required. Response managed by representatives of the FOSC, SOSC and the RP.

Evaluate the capability of RP to carry out an appropriate response given the situation.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

### 4. Spill Response Organization

Establish command structure as described in Unified Plan, Vol I, ANNEX B. Include FOSC representative, SOSC representative, and RP's Incident Commander. The group will always strive to reach consensus decisions. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOSC make unilateral decisions.

### 5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.

Contain the discharge. Containment of this spill will require immediate response by personnel on scene at the time of the spill. Depending on the status of the tide, the spill may escape

containment before sorbent boom or containment boom can be placed. The force of the ice in combination with the tidal current will make boom deployment difficult. Near freezing temperatures will make working on the water more hazardous and difficult than normal.

Mechanical recovery is always the primary consideration in spill response. It is unlikely that, for this scenario, any free product will be recovered before it can naturally disperse, evaporate, and dissipate.

If shoreline impact appears imminent, direct RP to implement shoreline protection measures/cleanup techniques of his response plan.

Resource trustees coordinate with the RP planning staff to ensure that wildlife concerns are properly addressed.

Agency and organization concerns that can't be resolved at the lower levels of the command structure are presented to the Unified Command for resolution.

#### 6. Resource Requirements

- a. Equipment: Quick deployment of on scene response equipment is mandatory. Historically, diesel fuels have been difficult to recover in the fast flowing waters of Upper Cook Inlet. Sorbent booms/sweeps/pads along with containment boom maintained by the facility/vessel owners must be deployed as soon as possible to contain the spill. If this spill escapes initial containment, it will likely be unrecoverable.
- b. Personnel: Initially, deployment is handled by personnel on scene at the time of the spill. RP's call up of personnel to respond to this spill will be adequate for response. Federal/State manpower commitment is not expected to interfere with normal, day-to-day operations. Limited involvement of resource trustees is anticipated.

#### 7. Resource Availability and Resource Procurement

No problems anticipated. Resources on hand expected to be adequate. Procuring the resources identified in this spill response is the RP's responsibility. A spill of this volume would not unduly burden the RP since the necessary resources to respond to this spill should be on hand.

#### 8. Shortfalls

- a. Equipment: No shortfall anticipated.
- b. Personnel: No shortfall anticipated.
- c. Funding: Funds availability and access should pose no problem regardless of the financial capabilities of the RP. If funding problems arise, the FOSC has access to the Oil Spill Liability Trust Fund and procedures are in place to make these funds available. The SOSOC, in the event of a State funded response, has access to the HB470 fund and procedures are in place to make these funds available, as well.
- d. Minimum Response Times: Response should be initiated immediately, and one can reasonably expect response equipment to be in the water within 30 minutes.

#### 9. Spill Cleanup Timetable

This response should last no more than three days. After that time, spilled product will have evaporated, dissipated, or dispersed.

10. Disposal Options

Same As WORST CASE SCENARIO.

11. Cleanup Termination

Same As WORST CASE SCENARIO.

## SCENARIOS: PART TWO - HAZMAT

### A. HAZMAT VESSEL SCENARIO - WORST CASE

**Size of the Discharge:** One or more 5000 gallon Inter Modal (IM) tanks containing a formaldehyde solution has ruptured in the forward hold, lead acid batteries are also present in the hold and may also be punctured.

**Event Description:** The S/S Trader is inbound Cook Inlet from Seattle; the vessel is scheduled to arrive at the Port of Anchorage in approximately 30 hours. The master reports the vessel encountered heavy seas while crossing the Gulf of Alaska and there is damage to on deck cargo. Ten containers were lost overboard. None of the damaged containers on deck contain hazardous material (HAZMAT). The master also reports the crew noted a strong odor of formaldehyde in the vicinity of the forward cargo hold vents. The dangerous cargo manifest (DCM) indicated that there are two IM portable tanks in the hold. Each tank contains 5000 gallons of formaldehyde solution (49% formaldehyde and 20 % methanol by volume). According to the DCM, the forward hold also contains a container loaded with 10 pallets of lead acid batteries (35-50 batteries per pallet). The stowage plan shows the IM tanks are next to each other with one to the left and one to the right of the vessel's centerline; the container with the batteries is immediately behind the tank on the right. The hold is fitted with power ventilation and explosion proof electrical fittings. Access to the hold's tank top is by vertical ladder located on the center line both fore and aft.

The master has members of the crew conduct an initial assessment of the hold when the weather abates. Because of the heavy odor of formaldehyde, the crew members who enter the hold don self-contained breathing apparatus (SCBA) and fire fighting personal protective equipment (PPE). The entry team reports seeing liquid running out of one of the IM tanks in the vicinity of the discharge valve. They also report that the container of batteries is damaged, although it cannot be determined if the batteries are damaged. The tank top behind the IM tanks is wet, including the deck in the vicinity of the containers located behind the IM tanks. The liquid is pooling in the back end of the hold. The crew does not know how much formaldehyde has leaked out of the damaged IM tank. In addition, the crew members report seeing a couple of light fixtures which look like they have been damaged. Due to the combustible nature of formaldehyde, the master has power to the forward hold secured. While in the cargo hold, one of the Entry Team members' PPE is cut, and the individual reports a burning sensation to the exposed skin.

**Location:** Entering Cook Inlet, 30 hours outside of the Port of Anchorage.

**Spill:** At least one of the IM tanks containing a formaldehyde solution has ruptured. Additionally, it is suspected that some of the lead acid batteries may also be punctured.

**Date:** Mid-December

**On-scene Weather:** Winds: W@15kts; Sea State: 40% coverage, open pack ice; Temp: 15 °F

**Sensitive Areas at Risk:** Specific information on resources at risk can be extracted from the Sensitive Areas Appendix in consultation with the resource trustees. Formaldehyde is a known toxin and is toxic to aquatic habitats.

#### **Initial Action Description:**

1. Notification

Same As COASTAL WORST CASE SCENARIO.

2. Response Activation

Commence with notification of all involved parties per Annex H, providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, the type of the hazmat incident, if the material has been contained, etc.

Ensure that RP is responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Draft POLREP (USCG) and SITREP (ADEC) and distribute.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of all responders.

Establish Safe Zone around spill area to prevent combustion, if necessary.

Determine what response actions have occurred or are underway.

Issue Notice of Federal Interest to RP.

### 3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Activate the response structure to the level deemed necessary.

Deploy containment equipment.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post maybe required. Response managed by representatives of the FOSC, SOSC and the RP.

Evaluate the capability of RP to carry out an appropriate response.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

4. Spill Response Organization

Establish command structure as described in Unified Plan, Annex B. Include FOSC representative, SOSC representative, and RP's Incident Commander. The group will always strive to reach consensus decisions. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOSC make unilateral decisions.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.

Contain the discharge. Containment will require immediate response by personnel on scene at the time incident. Isolation and containment of the formaldehyde solution is the primary objective. Freezing temperatures will make working on the water more hazardous and difficult than normal.

6. Resource Requirements

- a. Equipment: Response personnel maybe required to enter the hold area in Level A suits. A hazmat team from the municipality of Anchorage may be called in to aid in containment of the spilled material. A decontamination area will be needed to decontaminate personnel involved with the initial response.
- b. Personnel: The initial crew responders may need the aid of the Coast Guard and hazmat personnel. Emergency personnel that are trained with hazmat procedures will be needed to aid hazmat exposure victims.

7. Resource Availability and Resource Procurement

Currently, there is mutual aid agreement between the US Coast Guard and the Municipality of Anchorage. However, it is uncertain that a hazmat team would be able to mobilize to this type of incident.

Procuring the resources identified in this response is the RP's responsibility. An incident of this volume may burden the RP, since the necessary resources to respond to this type of incident will most likely not be on hand.

8. Shortfalls

- a. Equipment: The crew does not have Level A or B capabilities on board. Booming and

spill containment equipment is also limited, and may not meet the specific needs of this type of contaminant. The nearest hazmat team is located in Anchorage, and mobilization to the incident may be problematic. Moving the vessel closer to the port to facilitate access by the responders may endanger the biota of Cook Inlet. In addition, there are no medical facilities in Alaska that are prepared to accept hazmat victims. If decontamination cannot be performed on the vessel due to lack of equipment, or rough seas, personnel will need to be decontaminated prior to their arrival at a medical facility.

- b. Personnel: The crew does not have the response capabilities nor the proper training to adequately respond to this type of incident on board the vessel.

Emergency medical personnel are not prepared to handle situations that involve hazmat victims.

- c. Funding: Funding of response and cleanup actions will be the responsibility of the RP.

- d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

This response should last no more than three days. Delays in procuring response personnel and equipment may extend the response time.

10. Disposal Options

Currently there are no facilities in Alaska that are licensed to accept hazardous materials. All wastes generated in this response will have to be contained and transported to a facility in the continental US in an EPA, ADEC and DOT approved manner.

11. Cleanup Termination

Same As WORST CASE SCENARIO.

## **B. HAZMAT INLAND SCENARIO - WORST CASE**

**Size of the Discharge:** Two 200,000-pound capacity rail cars carrying 20,000 gallons of formaldehyde solution each have overturned at the crossing near rail mile marker 71.5 enroute to Anchorage from Whittier. Only one of the tank cars appears to have been damaged, losing most of its contents. There were no fatalities, but one railroad employee was taken to the hospital to treat a broken limb.

**Event Description:** Several rail cars derailed and overturned when a locomotive struck a recreational vehicle (RV) which had stalled on the railroad tracks in the early morning hours. An engineer warns that two of the rail cars contain a solution of 65% formaldehyde and 10% methanol. The rail cars are lying on their sides and the fittings have snapped off one tank causing a twenty-inch diameter rupture. The other rail car containing the formaldehyde solution appears to be severely dented and scratched, but no leaks are initially observed. The Alaska Railroad Corporation (ARRC) and the Alaska State Troopers have been notified. Several other cars were derailed during this incident, but the contents are either non-hazardous goods or the cars were empty.

**Location:** The incident has occurred within the boundaries of the Chugach State Park, along the Seward Highway at rail road mile 71.5, within the greater Anchorage area borough. This area is adjacent to a wetland which is associated with the Turnagain Arm of Cook Inlet. A well defined surface drainage is approximately ten meters down gradient of the incident. The town of Girdwood is located approximately three and a half miles to the north. Alyeska is located approximately three miles to the northeast.

### **Spill:**

**Date:** 27 September

**On-scene Weather:** Early morning ground fog cover; Winds: W@<5kts; Temp: 35 °F

**Sensitive Areas at Risk:** There is a wetland that is adjacent to the Seward Highway. Contents of the rail have migrated into a drainage feature to the wetland. Formaldehyde is a known toxin, and is toxic to aquatic habitats.

### **Initial Action Description:**

#### 1. Notification

A motorist who observes the accident calls 911. The Alaska State Troopers respond. In addition, the train engineer notifies his dispatcher who contacts the State and Federal agencies as well as the ARRC response personnel.

#### 2. Response Activation

Commence with notification of all involved parties. providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, the type of the hazmat incident, if the material has been contained, etc.

Ensure that Responsible Party (RP) is responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, preferably an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of all responders.

Establish Safe Zone around spill area to prevent explosion, if necessary.

Determine what response actions have occurred or are underway.

### 3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Activate the response structure to the level deemed necessary.

Deploy containment equipment.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post maybe required. Response managed by representatives of the FOSC, SOSC and the RP.

Evaluate the capability of RP to carry out an appropriate response given the situation.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

### 4. Spill Response Organization

Establish command structure as described in the Unified Plan, Annex B. Include FOSC representative, SOSC representative, LOSC representative (if immediate threat to public safety and health exists), and RP's Incident Commander. The group will always strive to reach consensus decisions. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOSC make unilateral decisions.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.

Contain the discharge. Containment will require immediate response by personnel on scene at the time incident. Isolation and containment of the formaldehyde solution is the primary objective. Booming and deflecting the spill away from the wetland should be done as soon as possible.

6. Resource Requirements

- a. Equipment: Mobilization of containment and spill resources will be required within the first thirty minutes of the response.
- b. Personnel: A spill response team from the Alaska Railroad Corporation is called to the scene to respond to the spill. The Alaska State Troopers who first respond to the incident will remain at the scene to control traffic and to deter people from approaching the scene. State and Federal agencies will act as oversight. The Department of Fish and Game, the US Department of the Interior, Office of Environmental Policy and Compliance, and the Chugach State Park will be notified and consulted if other environmentally sensitive areas need to be identified.

7. Resource Availability and Resource Procurement

A van that has been stocked by the Railroad with hazardous materials response supplies and two absorbent material stockpiles are located in Anchorage, another cache of absorbent materials is also located in Portage. Spill response kits are also located at each of these locations.

Procuring the resources identified in this response is the RP's responsibility.

8. Shortfalls

- a. Equipment: The response stockpiles are located in Anchorage (43 miles to the north) and in Portage (7 miles to the southeast). The spill response kit and absorbent material (located in Portage) may, if used properly, be able to contain the spill until more equipment is transported from Anchorage. A formaldehyde spill kit is located in Healy, approximately 287 miles north of the incident. Transportation of the kit to the incident would take approximately 5 hours by highway.
- b. Personnel: Railroad personnel at the incident may not be able to aid in the response due to injuries. Additional ARRC personnel will have to be transported to the incident.
- c. Funding: Funding of response and cleanup actions will be the responsibility of the responsible party.
- d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

This response should last no more than one day. Delays in procuring response personnel and equipment may extend the response time.

10. Disposal Options

Currently there are no facilities in Alaska that are licensed to accept hazardous materials. All wastes generated in this response will have to be contained and transported to a facility in the continental US in an EPA, ADEC and DOT approved manner.

11. Cleanup Termination

Same As WORST CASE SCENARIO.

## C. HAZMAT INLAND SCENARIO - MOST PROBABLE CASE

**Size of the Discharge:** One container of chlorine gas (150 lbs) was released into the atmosphere from the chlorine storage area at the Soldotna High School.

**Event Description:** At approximately 0700 hours, a member of the high school janitorial staff responded to an alarm originating in the pool area. When the janitor approached the area he noticed the distinct odor of chlorine and left the area. The janitor contacted his supervisor and then the principal. The principal called 911 and began the evacuation of the school. It is expected that 465 people will be exposed due to a release of this size.

**Location:** The incident has occurred in the chlorine storage area at the Soldotna High School.

**Spill:** Over a period of approximately 30 minutes 150 pounds of gaseous chlorine was released into the atmosphere. The incident occurred due to valve failure on one of the chlorine tanks used at the high school pool.

**Sensitive Areas at Risk:** The Soldotna High School is located adjacent to the Kenai River. There are 326 residents/workers within 1 sq km of this area. There are 457 people identified as a special population at risk associated with this incident.

**Date:** 1 May

**On-scene Weather:** Winds: W@14 kts; Temp: 45°F

### **Initial Action Description:**

#### 1. Notification

The Soldotna High School Principal called 911 and began the evacuation of the school. Local enforcement officials began evacuation of citizens within a 0.5 mile radius of the school. Local television and radio stations are notified, and will broadcast emergency evacuation instructions.

#### 2. Response Activation

Local enforcement and fire fighting personnel arrive on-scene to limit access.

Ensure health and safety of all responders.

Determine what response actions have occurred or are underway.

#### 3. Initial Response Actions

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Evacuate personnel.

Complete notification process.

Activate the response structure to the level deemed necessary.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post is not required.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

4. Spill Response Organization

Establish command structure as described in the Unified Plan, Annex B. Include FOSC representative, SOSC representative, and RP's Incident Commander.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.

6. Resource Requirements

a. Equipment: Any action to contain, plug or prevent additional chlorine release will require the use of Level A PPE.

b. Personnel: Personnel responding to this incident (police, and fire department) will be required to be trained to at least the first responder technician level.

7. Resource Availability and Resource Procurement

The local police and fire departments will respond to this incident upon notification through the 911 system. Additional resources, outside of those provided by the first responders will be the responsibility of the RP. An incident of this size will most likely involve evacuation.

8. Shortfalls

a. Equipment: Fire fighting equipment and police vehicles will be needed for limiting access to the incident; a HAZMAT team will most likely not be requested due to the amount and release time of the chlorine. By the time a HAZMAT team could arrive on scene, most or all of the chlorine will have been released.

b. Personnel: Additional personnel trained in first response may be needed to carry out evacuation plans. If evacuation personnel are not available, sheltering in place may be required for this type of incident.

c. Funding: Funding of response and clean-up actions will be the responsibility of the responsible party.

d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

This response should last no more than one day. Cleanup is not required if there is a total loss of chlorine.

10. Disposal Options

No waste should be generated during this response, however in the event there was waste generated there are no facilities in Alaska that are licensed to accept hazardous materials. All wastes generated in this response will have to be contained and transported to a facility in the continental US in an EPA, ADEC and DOT approved manner.

11. Cleanup Termination

Same As WORST CASE SCENARIO.

## SCENARIOS: PART THREE - INLAND OIL

### A. INLAND OIL PIPELINE – WORST CASE SCENARIO

**Size of the Discharge:** Approximately 100,000 gallons of crude oil has spilled from the Alaskan pipeline due to valve failure in a remote area in the Kenai Peninsula.

**Event Description:** During an inspection of the pipeline, a large spill is detected by the pilot. Regular inspections of the pipeline have not been possible due to inclement weather. This inspection is the first in two weeks. It is initially estimated that several thousand gallons of crude oil spilled onto the ground.

**Location:** A remote area between the Swanson River Oil Field and Nikiski.

**Spill:** 100,000 gallons of crude oil from an 8" pipeline was spilled to the ground.

**Sensitive Areas at Risk:** Wetlands have been identified within the spill area. Other sensitive areas are discussed in Sensitive Areas Section.

**Date:** 13 February

**On-scene Weather:** Winds: E @20 kts; Temp: -15 °F

#### **Initial Action Description:**

1. Notification

Same as WORST CASE SCENARIO FOR COASTAL SCENARIO.

2. Response Activation

Commence with notification of all involved parties, providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, the type of incident, size of the spill, if the material has been contained, etc.

Ensure that the Responsible Party (RP) is responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of all responders.

Evaluate slick size, direction, area of coverage, wildlife impacts, wildlife observed in area, on scene weather, etc.

Establish Safe Zone around spill area to prevent combustion, if necessary.

Determine what response actions have occurred or are underway.

Issue Notice of Federal Interest and Letter of State Interest to RP.

3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Activate the response structure to the level deemed necessary.

Deploy containment equipment.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post maybe required. Response managed by representatives of the FOSC, SOSC and the RP.

Evaluate the capability of RP to carry out an appropriate response given the situation.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

4. Spill Response Organization

Establish command structure as described in the Unified Plan, Annex B. Include FOSC representative, SOSC representative, and RP's Incident Commander. The group will always strive to reach consensus decisions. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOSC make unilateral decisions.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source. Contain the discharge.

6. Resource Requirements

- a. Equipment:
- b. Personnel:

7. Resource Availability and Resource Procurement

The pipeline company has some response capabilities, additional response resources will be made available from industry response cooperative stock-piles and State and Federal resources if necessary.

Procuring the resources identified in this response is the RP's responsibility. An incident of this volume may burden the RP.

8. Shortfalls

- a. Equipment: Due to the remote area, the transportation of equipment (and personnel) may require additional time and effort.
- b. Personnel: Due to inclement weather and the lack of first responders, additional personnel may need to be transported from other areas to aid in the response.
- c. Funding: Funding of response and cleanup actions will be the responsibility of the responsible party.
- d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

This spill response/cleanup will continue until the fall/winter weather forces a halt in operations due to personnel safety. The cleanup may then be expected to continue as soon as spring weather will allow. The number of years required to terminate cleanup operations depends heavily upon the efficiency of the initial response.

10. Disposal Options

Same as WORST CASE SCENARIO (Coastal Oil).

11. Cleanup Termination

Same as WORST CASE SCENARIO (Coastal Oil).

## **B. INLAND OIL TRANSPORTATION – WORST CASE SCENARIO**

**Size of the Discharge:** Two thousand gallons of fuel oil was spilled onto the ground adjacent to a sensitive area (wetlands).

**Event Description:** A tank truck carrying approximately 4000 gallons of fuel oil over-turned ½ mile north of the town of Seward. The driver lost control of the vehicle after hitting two moose that were crossing the road. The tank truck overturned, spilling some of the contents onto the ground and surrounding area.

**Location:** The incident occurred ½ mile north of the town of Seward.

**Spill:** Two thousand gallons of fuel oil spilled to the ground and surrounding areas.

**Sensitive Areas at Risk:** Wetlands adjacent to the Seward Highway have been identified to be at risk. Other sensitive areas are discussed in Appendix V of Annex D.

**Date:** 2 July

**On-scene Weather:** Winds: E @ 5kts; Temp: 56°F

### **Initial Action Description:**

#### 1. Notification

Initially the driver of the vehicle notified the Alaska State Troopers.

#### 2. Response Activation

Commence with notification of all involved parties per Annex H, providing initial situation assessment. Be brief but concise and provide specific spill information: exact location, the type of incident, size of spill, if the material has been contained, etc.

Ensure that Responsible Party (RP) is responding.

Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.

Consult with affected natural resource trustees on resources at risk and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.

Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC's Historic Properties Specialist.

Dispatch representatives to the scene at the first opportunity.

FOSC/SOSC/RP Representatives establish direct communications.

Ensure health and safety of all responders.

Establish Safe Zone around spill area to prevent combustion, if necessary.

Determine what response actions have occurred or are underway.

Issue Notice of Federal Interest and Letter of State Interest to RP.

3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Activate the response structure to the level deemed necessary.

Deploy containment equipment.

Ensure notification of resource trustees using Emergency Notification Checklist.

Command Post may be required. Response managed by representatives of the FOOSC, SOOSC and the RP.

Evaluate the capability of RP to carry out an appropriate response given the situation.

Evaluate RP's plan for securing the source.

Ensure preparation of Site Safety Plan.

Determine feasibility of removal actions based on:

- Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
- Can cleanup be initiated before the pollutant disperses, making cleanup impractical?
- Can equipment be deployed without excessive risk to the life and health of personnel?

4. Spill Response Organization

Establish command structure as described in the Unified Plan, Volume I, Annex B. Include FOOSC representative, SOOSC representative, and RP's Incident Commander. The group will always strive to reach consensus decisions. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOOSC make unilateral decisions.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.      Contain the discharge.

6. Resource Requirements

- a. Equipment: Sorbents, Booms and other material will be required to contain and prevent the spread of the spill. After any explosive threat is removed, a tanker truck will be brought in to transfer the contents of the damaged tanker.

- b. Personnel: Due to the volume of the spill, additional personnel may be required to aid in containment and cleanup.

7. Resource Availability and Resource Procurement

Resources need to be transported to the scene. Procuring the resources identified in this response is the RP's responsibility. An incident of this volume may burden the RP.

8. Shortfalls

- a. Equipment: Equipment supply within the Kenai Peninsula Borough is limited. Stockpiles of equipment at local facilities or at the response cooperatives may be utilized given that a prearrangement has been made.
- b. Personnel: There are very few first responders and trained response personnel in this remote area. Additional aid may be requested from ADEC.
- c. Funding: Funding of response and cleanup actions will be the responsibility of the responsible party.
- d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

Response to this incident will most likely terminate in one to three days. Cleanup, however, may extend for many months, depending on the effectiveness of the initial response.

10. Disposal Options

Same as WORST CASE SCENARIO.

11. Cleanup Termination

Same as WORST CASE SCENARIO.

### C. MAXIMUM MOST PROBABLE CASE SCENARIO

**Size of the Discharge:** Approximately 13 gallons of crude oil spilled at the Tesoro Refinery.

**Event Description:** During the transfer of crude oil, an overfill occurred resulting in the loss of 13 gallons of crude oil onto the ground.

**Location:** Tesoro Refinery, near Nikiski.

**Spill:** Thirteen gallons were reported to have been spilled.

**Sensitive Areas at Risk:** No sensitive areas are known to be at risk.

**Date:** Mid-August

**On-scene Weather:** Winds: S@ 5 kts; Temp: 57 °F

#### **Initial Action Description:**

1. Notification

ADEC and NRC are notified within 24 hours.

2. Response Activation

Federal and State personnel will not be required to respond to this incident.

3. Initial Response Actions

Evacuate personnel, if required.

Complete notification process.

Deploy containment equipment.

4. Spill Response Organization

The RP is responsible for the cleanup of the spill.

5. Containment, Countermeasures, and Cleanup Strategies

Secure the source.      Contain the discharge.

6. Resource Requirements

a. Equipment: Absorbent material will be required for this size of incident, additional booming material may be required.

b. Personnel: The RP will notify internal spill response personnel to contain and cleanup the spill.

7. Resource Availability and Resource Procurement

Resources should be available at the facility to contain this type of spill. Procuring the resources identified in this response is the RP's responsibility. An incident of this volume will not burden

the RP.

8. Shortfalls

- a. Equipment: No shortfalls are expected.
- b. Personnel: No shortfalls are expected.
- c. Funding: Funding of response and cleanup will be the responsibility of the RP.
- d. Minimum Response Times: Response should be initiated immediately.

9. Spill Cleanup Timetable

This incident should be terminated within a few hours.

10. Disposal Options

Same as WORST CASE SCENARIO.

11. Cleanup Termination

Same as WORST CASE SCENARIO.