

# COOK INLET SUBAREA CONTINGENCY PLAN

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# SCENARIOS: PART ONE - COASTAL OIL

## A. WORST-CASE SCENARIO

**Size of the Discharge:** A tank vessel's entire cargo of 790,000 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 Nagahut Rocks to the west 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° 1'N; Longitude 151° 77'W. Nagahut Rocks are located at the entrance to Cook Inlet 3 miles to the west of Perl Island. The location is not marked with a USCG-maintained aid to navigation.

**Spill:** The total cargo load, 790,000 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 (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 affected by consuming oiled carrion. The Barren Islands, depending on the current 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 affected by 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 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 affected by a spill of this magnitude.

### **Initial Action Description:**

#### **Notification**

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

FOSC will notify the following:

- \* ADNR
- \* ADMVA
- \* DHSEM
- \*\* ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
- \*\* ADF&G
- \*\* CGD17 Command Center (CC), to activate support resources including:
  - D17 (p), District Prevention Division
  - DRG, District Response Group
  - DRAT, District Response Advisory Team
  - PIAT, Public Information Assist Team
  - RRT, Regional Response Team
- \*\* NRC, National Response Center
- \*\* DOI, Department of Interior
- \*\* Alaska Department of Health and Human Services
- \*\* Center for Disease Control
- \*\* US Fish and Wildlife
- \*\* NSFCC, National Strike Force Coordinating Center
- \*\* NPFC, National Pollution Fund Center
- \*\*\* EPA
- \*\*\* D17 Tribal Liaison
- \*\*\* NOAA SSC, Scientific Support Coordinator
- \*\*\* Local Emergency Managers of any affected/threatened communities
- \*\*\* Kenai Peninsula Borough
- \*\*\* Kodiak Island Borough
- \*\*\* Federally –recognized tribes in affected communities

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

### 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 support from USCG Air Station Kodiak through D17 CC to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated.
- Request USCG cutter support from Homer through D17 CC. 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.

### **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 Sector Anchorage training room as the initial Command Post while USCG/ADEC personnel are enroute to Nikiski Command Center.

### **Initial Response Actions**

- Secure the source, if possible.
- Determine if the tanker can be safely moved into a more sheltered area. Permission shall be requested from the USCG and ADEC prior to moving a leaking vessel. Places of Refuge will be evaluated in accordance with Section H of the Cook Inlet Subarea Contingency Plan and Annex O of the Alaska Unified Plan.
- 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.
- Implement the Federal/State Unified Plan and Cook Inlet Subarea Contingency Plan.
- Using Unified Plan, Annex B, implement the Incident Command Systems (ICS) principles listed below. A USCG Federal On-Scene Coordinator (FOSC) and an ADEC State On-Scene Coordinator (SOSC) contact the vessel Incident Commander and establish a Unified Command. A Unified Command and incident management team composed of industry, federal, state and local government personnel arrive at Incident Command Post in Anchorage, AK. Additional initial Unified Command tasks include:
  1. Evaluate RP's capability to carry out an appropriate response.
  2. Determine name of incident.
  3. Determine goals and objectives
  4. Determine UC staff and size - Liaison and RSC positions are critical for this region.
  5. Establish an appropriate ICP to support UC activities in Anchorage, AK.
  6. Establish an appropriate Forward Operating Base in Nikiski, AK
  7. Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- Place firefighting 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, NPFC, NSFCC, and USCG Shore Infrastructure Logistics Center (SILC) (pcb-1) Emergency Contracting Branch.
- Develop joint goals and objectives with the RP/State/USCG to draft an IAP.
- 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 found in Annex F of the Unified Plan.
- 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.
- 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?

### 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 FOSC 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 such as the RCAC. Community representation during spill response will be directed through the liaison officer and thence to the Unified Command.

### 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 the 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.

### Resource Requirements

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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. Given the volume of this spill scenario, it is anticipated that skimming systems will be immediately requested from the major spill cooperatives in Alaska, and deployed to the spill area. (Mutual Aid Agreements between the major spill response co-ops should allow for temporary, out-of-region deployments of major spill response equipment.) Releasing equipment designated for a regulatory response requirement in one area to be used in a response in a different area must be addressed by the Unified Command. The equipment and vessels should arrive on scene with all equipment prepared for immediate deployment. The major spill cooperatives in the State include: Cook Inlet Spill Prevention and Response Inc. (CISPRI); Alyeska Pipeline Service Company (APSC) Ship Escort Response Vessel System (SERVS); Alaska Clean Seas (ACS); Alaska Chadux Corporation (ACC); Southeast Alaska Petroleum Resource Organization (SEAPRO); and the U.S. Navy Supervisor of Salvage (NAVSUPSALV). Resources available from CISPRI include, but are not limited to the following:

#### A. Skimmers:

Vessel	System	Capacity(bbls/hr)
PERSEVERANCE	13/30 Crucial skimmer w/Current Buster	79
CISPRI RESOLUTION	Lamor Front Collection System	52
OMSI RESOLUTION	13/30 Crucial skimmer w/Harbour Buster	79
MORIAH	13/30 Crucial skimmer w/Harbour Buster	79

#### B. Offshore Storage:

Barge	Capacity	Additional Info	Capacity(bbls/hr)
Barge 141	59,421bbls	Crucial 56/30 Disk Skimmer	354bbls/hr
RESPONDER	12,405bbls	Crucial 56/30 Disk Skimmer	354bbls/hr

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, Nanwalek, 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.

### **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, Chadux) that would allow the resources of Chadux, 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 millions of dollars 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.

### **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.
- B. 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.
- C. 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.
- D. Personnel (logistical/training problems):

- i. 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.
  - ii. 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.
  - iii. 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.
  - iv. 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.
- E. 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.
- i. 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.
  - ii. 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.

### **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.

### **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.

### **Cleanup Termination**

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

- 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
- Further removal operations would cause more environmental harm than the oil to be removed; or
- 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
- Activities required to repair unavoidable damage resulting from removal actions have been performed.

## **B. MAXIMUM PROBABLE SCENARIO**

**Size of the Discharge:** A wellhead blowout discharge of 5500 bbls/day for 15 days.

**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 FOSC's Historic Properties Specialist.
- Request immediate helicopter support from USCG Air Station Kodiak through D17 CC to conduct over flights 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 CC. 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 BSEE 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 15 day discharge of 5500 bbls/day would equate to a 82,500 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 per Annex F in the Unified Plan. **The location of this spill is in the undesignated area under the dispersant use plan.** 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.

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:** POL 1, 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 - INLAND OIL

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

*This scenario is based on scenarios in the Hilcorp Alaska, LLC, Oil Discharge Prevention and Contingency Plan (ODPCP) for the Cook Inlet Production Facilities (Approved June 8, 2012, Revision 9)*

**Size of the Discharge:** Approximately 250,000 gallons of crude oil have spilled from the Hilcorp Alaska's Swanson River Pipeline.

**Event Description:** The Swanson River crude oil transmission pipeline is an onshore pipeline approximately 18.8 miles long between Swanson River Field and Kenai Pipe Line Company Terminal. The pipeline has valves located at Swanson River Field, and at its terminus at Kenai Pipe Line Company Terminal. During an aerial 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:** 13 miles from the pipeline terminus in Niksiki, near the Swanson River pipeline crossing. Visible oil and contaminated snow and soil is within 100 feet of the Swanson River. The Swanson River crosses the pipelines approximately 6.8 miles from its outlet into Cook Inlet.

**Sensitive Areas at Risk:** Specific information on resources at risk can be extracted from the Sensitive Areas Section in consultation with the resource trustees. Resources in the immediate area of the spill that are at risk include the Swanson River and its adjacent wetlands. Swanson River is an anadromous stream, with a fairly small silver salmon population. Dolly Varden and rainbow trout are also prevalent in the river. The spill is located within the Kenai National Wildlife Refuge. The area is also a seabird concentration area.

**Date:** 13 February

**On-scene Weather:** Winds: East, 20 mph; Temp: 25 °F

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

##### 1. Notification

Facility personnel notify the NRC and the ADEC. The NRC notifies EPA Region 10 Alaska Operation's Office personnel who then notify appropriate Federal agencies including Natural Resource Trustees. (Assume the responsible party has notified the required agencies in accordance with the facility response plan).

FOSC (EPA will notify the following):

\*\*\* ADEC (also notified by the responsible party)

\* ADNR

\* ADF&G

\* ADMVA, DHSEM

\*\*\* ARRT

\*\*\* NRC, National Response Center

\*\*\* USCG

\*\*\* DOI

- \*\*\* DOC
- \*\*\* NOAA SSC, Scientific Support Coordinator
- \*\* NSFCC, National Strike Force Coordinating Center
- \*\* NPFC, National Pollution Fund Center
- \*\*\* Local Emergency Managers of directly affected communities
- \*\*\* Federally-recognized tribes in affected communities

**Key:**

- \* = Notification initiated by State
- \*\* = Message notification
- \*\*\* = Notification by FOSC

**Response Activation:**

- Commence with notification of all potentially involved parties and provide initial situation assessment. Be brief but concise and provide specific spill information: exact location, quantity spilled, potential immediate threats, source is/is not controlled, etc.
- Upon notification and request from the FOSC/SOSC, federal and state agencies located in the Joint Pipeline Office (JPO) designate "agency representatives" to work directly in the unified government response organization which is established to oversee the response and direct activities as necessary.
- Dispatch representatives to the scene at the first opportunity
- FOSC/SOSC/PRP Representatives establish direct communications.
- Begin recall of local in-house personnel (EPA, ADEC, ADNR, etc.) as needed to support 24-hour operations for a spill of this magnitude.
- Evaluate spill size, direction, area of coverage, proximity to Yukon River, 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 PRP
- Consult with DOI, DOC and the State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Activate FOSC's Historic Properties Specialist.

**Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:**

- Dispatch pollution investigators (EPA Anchorage and DEC NART) to the scene at the earliest opportunity. Aircraft schedules may not allow arrival until the following day depending upon time of spill and time of notification.
- Recognize that information will come from individuals on scene that may or may not be knowledgeable of emergency procedures or pollution response. Conflicting reports can be expected during the early phases of gathering information.
- Ensure notification of resource trustees using the Emergency Notification Checklist.
- Evaluate PRP's plan for securing the source.
- Evaluate the capability of the PRP to carry out an appropriate response given the situation.
- Prepare Initial POLREP (EPA).
- Prepare Initial SITREP (State).
- Instruct PRP to determine his/her ability to mechanically recover spilled product on land prior to reaching the Swanson River.

**Initial Response Actions:**

- Secure the Source. The CISPRI response team and additional local/regional resources are activated.
- The Federal/State Unified Plan and Cook Inlet Subarea Contingency Plan are also implemented.
- Using Unified Plan, Annex B Implement the Incident Command Systems (ICS) principles listed below. An EPA Federal On-Scene Coordinator (FOSC) and an ADEC State On-Scene Coordinator (SOSC) contact the facility Incident Commander and establish a Unified Command. By 5:00 PM that night a Unified Command and incident management team composed of industry, federal, state and local government personnel arrive at Hilcorp's headquarters in Anchorage, AK . Additional initial Unified Command tasks include:
  8. Evaluate PRP's capability to carry out an appropriate response.
  9. Determine name of incident.
  10. Determine goals and objectives
  11. Determine UC staff and size- Liaison and RSC positions are critical for this region.
  12. Establish an appropriate ICP to support UC activities in Anchorage, AK.
  13. Establish an appropriate Forward Operating Base in Nikiski, AK
  14. Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- The ADEC SOSC initiates a statewide callout for a Type 1 incident. Additional ADEC spill responders from other response areas are mobilized, and the SOSC also requests mobilization of other State agency support personnel.
- The ADEC SOSC and EPA FOSC also activate the ADEC term contractors and EPA START contractors, respectively. The contractors are notified for possible mobilization to assist with the federal and state oversight operation.
- Both Federal and State field observers are deployed to the initial control sites to monitor cleanup operations and advise the FOSC and SOSC of the status of on-going operations.
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas.
- Utilize local knowledge, SSC and other NOAA HAZMAT resources as necessary to predict spill trajectory and potential impacts.
- Prepare initial press release with the Unified Command.
- Complete notification procedures. Include up channel notification to include the RRT, NPFC, and NSFCC.
- Issue Notice to Airmen, through the FAA, restricting aircraft traffic in the immediate vicinity of the incident.
- Ensure preparation of Site Safety Plan.
- Consider alternatives to mechanical response: dispersant application, in situ burning. The use of dispersants is not appropriate due to the inland/fresh water location of spill and time of year.
- Schedule routine overflights of the affected area. Request FAA support in developing an aviation operations plan for the spill to control air traffic in the area.
- In consultation with trustee agencies, determine requirements for wildlife protection, collection, and rehabilitation.
- Consult with natural resource trustees on the protection of sensitive areas and resources.
- Consult with the Historic Properties Specialist on the protection of historic properties.
- Receive recommendations from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program.)

- Initiate wildlife hazing.
- Additional measures may be initiated during subsequent operational periods, beyond the initial response.
- Determine feasibility of removal actions based on:
  1. Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?
  2. Can cleanup be initiated before the pollutant disperses, making recovery impractical?
  3. Can equipment be deployed without excessive risk to the life and health of personnel?
- Considerations for future actions:
  - Determine any fisheries impacts, including subsistence fisheries, and take appropriate action.

**Spill Response Organization:**

A spill of this magnitude may be declared a Spill of National Significance (SONS). If the Unified Command determines the spill to be a SONS, the command structure, roles and responsibilities of a SONS scenario are identified in the Unified Plan, Annex B. The pre designated FOSC for the region becomes the Area Operations Coordinator. The SONS incident continues as a Unified Command response. The elevation 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice to the Unified Command.

**Containment, Countermeasures and Cleanup Strategies:**

Immediate containment is required to mount an effective recovery operation.

A spill of this volume that is not contained immediately but is allowed to spread will likely not be recoverable under these conditions. The time required to mount an effective response added to the extraordinary travel time and logistical difficulties will make this operation a challenge.

- In accordance with Hilcorp’s ODPCP response tactics to contain and clean-up the spill are implemented. Primary objectives are:
  - Site security
  - Keep oil on land and out of Swanson River
  - Implement recovery operations.
  - Protect sensitive resources and wildlife
  - Preserve the crime scene
  - Agency and stakeholder notification
- Tactics to achieve these objectives include:
  - Contain spill on land, to extent possible, with containment dikes and trenches constructed using earthmoving equipment
  - Use booms to contain oil at point of entry and in side channels of the Swanson River.
  - Recovery of oil in river using sorbent material (sweeps and booms) and skimmers.

- Organize Shoreline Cleanup Assessment Teams (SCAT) in preparation for shoreline surveys.
- Ensure the migratory bird deterrent, capture and treatment program is in place.
- 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 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.

**Response Requirements:**

Equipment: The equipment required for the PRP's spill response includes: heavy equipment for building dams, culverts, and berms for containment; vacuum trucks, sandbags, boom, pumps, skimmers, and some form of oil storage. The EPA Command Trailer and the DEC Command Trailer may likewise be deployed to provide on-scene command, control, and communications.

Personnel: Initial PRP response personnel would likely have to be augmented by their contractors on call for oil spill response and recovery. The RP's crew should be capable of deploying equipment and recovering product with assistance from their contractors. Representatives of Federal/State personnel would be required to reach the scene.

**Resource Availability and Resource Procurement**

The PRP provides all spill response related equipment with their contractors supplementing any shortage. Any FOSC or State expenses not directly covered by the PRP would be paid through the Federal Oil Spill Liability Trust Fund or the State 470 Fund, and reimbursement would be sought at a later date.

**Shortfalls**

Equipment: No shortfall of cleanup equipment anticipated. Housing and personnel support for response workers is available, but limited, especially with seasonal closures, in Kenai and Soldotna, Alaska. A Portable work-camp at may be necessary, 4-6 days required to transport and set-up portable accommodations.

Personnel: Personnel shortfalls are not anticipated.

Funding: Funds availability and access are not anticipated to be a problem.

Minimum Response Times: PRP response times must meet the times required in their approved response plans. These plans, having been approved by Federal and/or State agencies, will not be reevaluated here.

**Spill Cleanup Timetable**

Mechanical Cleanup Only: Mechanical cleanup time will depend on the duration of the discharge as well as the velocity of the creeks affected.

Mechanical in Conjunction with Non-Mechanical: Not applicable

**Disposal Options**

Debris disposal is the responsibility of the PRP. Recovered oil would be the largest volume of debris, although burning would significantly reduce the volume of oil collected. Oil contaminated response equipment will require cleaning in an area capable of collecting and treating the runoff. Disposal options are further discussed in the Unified Plan, Annex E, Appendix VI. A Waste Management Plan will also be developed for the incident.

**Cleanup Termination**

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

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

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

*This scenario is based on the plans of Blue Crest Energy to transport oil from the Cosmopolitan Development Plan to the refinery in Nikiski, Alaska via tanker truck.  
Please see the next section, C. Maximum Most Probable for a scenario regarding the railroad.*

**Size of the Discharge:** 12,000 gallons crude oil

**Event Description:** A tandem tank truck carrying approximately 350 barrels (14,700 gallons) of crude oil was transporting oil from Anchor Point to Nikiski, AK. A 40 foot recreational vehicle that crossed the center line and crashed into the tank truck on the Kasilof River bridge on the Sterling Highway. The tank truck went over the guard rail and onto the southern bank of the Kasilof River. The tank truck is overturned and sustained heavy damage to both tanks. Oil has spilled onto the ground and into the river. The truck driver and RV drivers were both transported to the hospital.

**Location:** Mile 109.3 of the Sterling Highway, Kasilof Alaska at Kasilof River. Crash debris and spill located on south bank, east of highway in Kasilof River State Recreation Site and boat ramp.

**Sensitive Areas at Risk:** The Kasilof River is an anadromous stream, with red, silver and king salmon the primary populations. Rainbow trout and dolly varden are also present.

A personal use salmon fishery is present at the mouth of the Kasilof. The Kasilof River is an important sport fishing river, with multiple commercial charter boat operators guiding fishermen during the summer and fall.

**Date:** 15 July

The response actions would be largely the same as for that of the Inland Oil WCD pipeline scenario. Additional considerations, specific to this scenario include:

- The trucking company, Crowley Petroleum Distribution, would be the PRP. However, it is expected that Blue Crest Energy would also be involved in the response as the oil producer who contracted Crowley to transport the oil.
- This is not expected to be declared a SONS.
- Negative economic impacts are expected. The economic impact will affect businesses that support sport-fishing on the Kasilof and Cook Inlet waters near the Kasilof and commercial fishing operations near the Kasilof.
- The food safety of salmon caught in both personal use fishery and commercial fishery salmon is expected to be a high concern.

**C. MAXIMUM MOST PROBABLE CASE SCENARIO (RAIL SCENARIO)**

*The largest oil spill in the inland zone of the Cook Inlet Subarea was the Alaska Railroad train derailment at Gold Creek in the Matanuska-Susitna Borough on December 22, 1999.*

*A similar train derailment would serve as a Worst-case Discharge for railroad transportation.*

**Size of the Discharge:** 120,000 gallons jet-A fuel

**Event Description:** An Alaska Railroad train derailed north of Talkeetna near Gold Creek; 15 cars and 3 engines out of 53 cars and 5 engines derailed. Seven of the rail cars were punctured, releasing the jet fuel that was being transported from the Williams Refinery in North Pole, AK to Anchorage, AK.

**Location:** Gold Creek, (Railroad Milepost 263), 36 miles north of Talkeetna.

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

**Date:** December 22

**Response:** Response to the site was limited due to drifting snow and avalanches. Crews were unable to reach the site for one and a half days. Fuel soaked through the snow, which was hoped to serve as a sorbent to the fuel, and into the ground and groundwater. Only 16,570 gallons of fuel was recovered 4 months after the spill, much of this amount was removed from the groundwater via recovery wells. A vapor extraction system was installed to remove fuel vapors from the soil.



## SCENARIOS: PART THREE - HAZMAT

### A. HAZMAT VESSEL SCENARIO – WORST-CASE DISCHARGE

**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 firefighting 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.
- Determine if the tanker can be safely moved into a more sheltered area. Permission shall be requested from the USCG and ADEC prior to moving a leaking vessel. Places of Refuge will be evaluated in accordance with Section H of the Cook Inlet Subarea Plan and Annex O of the Alaska Unified Plan.
- 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 if appropriate.
- Determine if any specialized response assets are needed and where they can be requested from.
- Ensure notification of resource trustees using Emergency Notification Checklist.
- The Federal/State Unified Plan and Cook Inlet Subarea Contingency Plan are also implemented.
- Using Unified Plan, Annex B Implement the Incident Command Systems (ICS) principles listed below. A USCG Federal On-Scene Coordinator (FOSC) and an ADEC State On-Scene Coordinator (SOSC) contact the vessel Incident Commander and establish a Unified Command. A Unified Command and incident management team composed of industry, federal, state and local government personnel arrive at Incident Command Post in Anchorage, AK. Additional initial Unified Command tasks include:
  - Evaluate PRP's capability to carry out an appropriate response.
  - Determine name of incident.
  - Determine goals and objectives
  - Determine UC staff and size- Liaison and RSC positions are critical for this region.

- Establish an appropriate ICP to support UC activities in Anchorage, AK.
- Establish an appropriate Forward Operating Base in Nikiski, AK
- Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- 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 DISCHARGE**

**Size of the Discharge:** 20,000 gallons formaldehyde solution (65% formaldehyde and 10% methanol)

**Event Description:** Several rail cars derailed and overturned at rail mile marker 250, near Curry, enroute to Fairbanks from Anchorage. The cause of the derailment is unknown at this time. There were no fatalities, but one railroad employee was taken to the hospital to treat a broken limb. Among the derailed cars are two 200,000-pound capacity rail cars carrying 20,000 gallons of formaldehyde solution each have overturned. Only one of the tank cars appears to have been damaged, losing most of its contents. 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) has notified the ADEC and National Response Center. 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 Denali State Park and adjacent to the Susitna River. A well-defined surface drainage is approximately ten meters down gradient of the incident. The unincorporated community of Curry is located approximately two miles south of the accident; few permanent residents live in the area but there are many recreational cabins in the vicinity. Talkeetna is 24 miles to the south. The location is in the Matanuska-Susitna Borough.

**Date:** August 13

**On-scene Weather:** Early morning ground fog cover; Winds: W@<5kts; Temp: 50 °F

**Sensitive Areas at Risk:** There is a wetland that is adjacent to the Susitna River and Susitna River. The Susitna River and many of its tributaries are anadromous streams. Adult (spawning) silver, red, pink and chum salmon are present in the upper Susitna River and its tributaries. Juvenile salmon of these species as well as king salmon are also present. The formaldehyde solution has migrated into a drainage feature to the wetland and river. Formaldehyde is a known toxin, and is toxic to aquatic habitats.

### **Initial Action Description:**

#### 1. Notification

The train engineer notifies his Alaska Railroad Corporation 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 Alaska Department of Fish and Game, Alaska Department of Natural Resources (Denali State Park) and the US Department of the Interior, Office of Environmental Policy and Compliance 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, other caches of spill response materials are also located in Hurricane, Healy and Fairbanks. The Railroad has a spill response contract with National Response Corporation, which would be activated.

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

8. Shortfalls

- a. Equipment: The response stockpiles are located in Anchorage (134 miles to the north), Hurricane (36 miles north) and Fairbanks (222 miles north). The materials located in Hurricane may, if used properly, be able to contain the spill until more equipment is transported from Anchorage. However, a formaldehyde spill kit is not available in the response supplies maintained by the Railroad. Transportation of the response materials from Anchorage to the incident would take approximately 5 hours. The Railroad will rely on its spill response contractor, National Response Corporation, to provide response equipment and materials specific to formaldehyde.
- 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.