Alaska Oil Discharge and Hazardous Substance Release Scenarios: Statewide Compilation

A reference for the Alaska Area Contingency Plans.

Compiled August 2019

Content compiled by the Alaska Inland Area Committee,
from Scenarios previously included in the superseded Subarea Contingency Plans.

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Record of Changes

Subarea Contingency Plan	Original Date	Last Revision Date
Aleutians Subarea	September 1999	May 2015
Bristol Bay	June 2001	February 2013
Cook Inlet	July 1997	January 2017
Interior Alaska Subarea	June 2000	March 2015
Kodiak Subarea	July 1998	August 2010
North Slope	December 1999	May 2012
Northwest Arctic	June 2001	March 2018
Prince William Sound	July 1997	October 2014
Southeast Alaska	July 1997	August 2012
Western Alaska	June 2001	February 2013

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ALEUTIANS

SCENARIOS SECTION

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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 ADEC Spills Database and the NOAA Scientific Support Coordinator (SSC) 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 SSC'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.

A portion of the Great Circle Route, a major international shipping route, is located within the Aleutians Subarea. An estimated 3,000-3,500 vessels, approximately 30-40 of them tank ships, transit through Unimak Pass each year. Approximately 65 bulk chemical tank vessels over 400 gross tons transit the area annually. Chemical cargos include ammonia, urea, liquefied natural gas, herbicides and pesticides, and chlorine. Foreign-flagged vessels transiting through this area may or may not have a federal tank or non-tank vessel response plan and Western Alaska geographic specific appendix, depending on whether they make US ports of call. See the report "Vessel Traffic in the Aleutians Subarea" for additional information. The report can be accessed at: www.dec.state.ak.us/spar/perp/docs/060920vesselreport_s.pdf

A joint ADEC-USCG study is currently underway that will address in detail risks posed by vessels transiting the Aleutians Subarea. The background and current status of this joint study can be found at the following website: www.dec.state.ak.us/spar/perp/ai_risk/ai_risk.htm

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

C. VULNERABILITY ANALYSIS

The natural habitats of the Aleutians Subarea support extensive fish and wildlife populations that are extremely important to the social, economic, and cultural welfare of local residents. Offshore areas support a highly productive marine ecosystem, rich with intertidal, benthic, and pelagic plant and animal life that, in turn, provides nourishment for extensive populations of marine and anadromous finfish, shellfish, seabirds, and marine mammals. Rocky shorelines and cliffs provide pupping/haul-out areas for seals and sea lions and nesting areas for seabirds.

Commercial fishing and fish processing are the economic mainstays in the region. There are approximately 400 fishing vessels operating in the Aleutian Island chain. Unalaska/Dutch Harbor has developed as a seafood supply and processing center with some port development. Unalaska is

consistently the top U.S. port in volume of fish and shellfish landings; in 2005, commercial fishermen unloaded 887.6 million pounds of fish and shellfish, worth $166 million.

In the Aleutians, Unalaska/Dutch Harbor serves as the major regional hub for the distribution of non-crude oils to the Aleutian villages, southern Bering Sea, and the offshore fishing fleet. Service in the southern part of the area is year round, but becomes ice dependent during late October to breakup. Unimak Pass and False Pass also witness heavy traffic both for transport servicing villages to the north and the Aleutian chain and for foreign-vessel transport between North America and the Far East.

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. SEASONAL CONSIDERATIONS

In the Bering Sea, the sea ice generally begins as fast ice formation along the shores of the Seward and Chukhotsk peninsulas in October. In November, as the cold weather continues and the waters in the open portions of the Bering Sea cool, the pack ice begins its seasonal southward formation. An estimated 97% of the ice in the Bering Sea is formed within the Bering Sea; very little is transported south from the Arctic Ocean through the Bering Strait. During periods of increasing ice and prevailing northerly winds, the ice moves southward with the wind before melting at its southern limit. During periods of southerly winds, ice coverage generally decreases in the Bering Sea, causing a wide variation in ice cover from month to month.

The region's maritime climate is comparatively mild with regard to general Alaskan temperatures; however, the islands are often fog-shrouded and frequently struck by storms. The weather in the region is the result of the interaction between major weather systems that move northward across the Gulf of Alaska or eastward across the Bering Sea and the land topography. The Aleutian Islands and the Alaska Peninsula are characterized by rugged and fjord-like coastlines rising to volcanic mountainous areas up to 9000 feet in elevation.

SCENARIOS: PART ONE - COASTAL OIL

A. WORST CASE SCENARIO

Size of the Discharge: A tank vessel's partial cargo of 200,000 barrels (of the 500,000 total capacity) of a heavy petroleum product (Vacuum Tower Bottom Blend, VTBB).

Event Description: The fictitious spot charter Tank Vessel (T/V) Attu experiences a boiler failure causing partial loss of power while enroute from Alaska to a Far East port. The vessel requests and is granted permission to divert to Dutch Harbor to undergo repairs. While attempting to navigate thru Unimak Pass, the vessel is struck by a fish processing vessel. Several tanks on the starboard side are compromised. Both vessels manage to proceed to Dutch Harbor where they will undergo repair.

Location: Approximate position- Latitude 54° 25'N; Longitude 165°05'W.

Spill: 200,000 barrels (8,400,000 gallons) of the total cargo load of 400,000 barrels of a heavy petroleum product (Vacuum Tower Bottom Blend, VTBB) are released during the first few hours of the collision.

Cargo Salvage: The vessel is not considered a total loss and plans are to initiate temporary repair of the damaged vessel in Dutch Harbor, and then proceed to a major shipyard for permanent repairs.

Time of Year: April

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

Discussion: 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 immediate area of the spill that are at risk include sea lions, otters, waterfowl concentrations, and seabird colonies. Unimak Pass is a major transportation route for vessels transiting the Great Circle Route between North America and the Far East. Any significant spill in this area would severely impact international trade as well as local and regional users of this location. The spill also occurs in the Alaska National Maritime Refuge area.

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 Akutan and Unalaska. In addition, several downstream communities 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 (also notified by the responsible party)***
- ADNR*
- ADF&G*
- ADMVA, DHSEM*
- 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
  - ARRT, Alaska 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 Managersof directly impacted communities***
- Federally –recognized tribes in impacted communities***
- City of Unalaska***

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 the 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.
- Request immediate helicopter support through D17 OPCEN to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated. Request USCG cutter support 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.
- Consult with DOI, DOC, and State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Activate FOSC's Historic Properties Specialist.

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 Sector Anchorage conference room as the initial Command Post while USCG/ADEC personnel are enroute to the field Command Center.

4. Initial Response Actions:

- Secure the source, if possible.
- Take actions to stabilize the vessel. Notify USCG Marine Safety Center of vessel information and situation. Request stability information.
- Develop containment/booming plan for implementation as weather abates. Prioritize areas for exclusion booming, protective booming, and shoreline cleanup. Review existing GRS developed for the Aleutians Subarea, especially for Aleutians East Zone B.
- Evacuate any injured personnel or unnecessary crew members.
- Using *Unified Plan, Annex B*, implement some or all of the Incident Command System (ISC) principals ; listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available)
    - Evaluate RP's capability to carry out an appropriate response.
    - Determine incident name.
    - Determine goals and objectives.
    - Determine UC staff and size.
    - Establish ICP to support UC activities – Plan for remote command post location in Dutch Harbor.
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
- Prepare initial press release jointly with the Unified Command.
- Complete notification procedures. Include up-channel notification to include the RRT, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.
- 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.
- 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 decisions on any recommendations (e.g. migratory bird deterrent and capture and treatment program)
- Determine any fisheries impacts, and take appropriate action.
- Consider alternatives to mechanical response: dispersant application, *in situ* burning, or destruction of entire vessel and cargo by burning.
- Schedule routine overflights of the impacted area. Request USCG support in developing an aviation operations plan for the spill to control air traffic in the area.
- Evacuate crew for drug testing if possible.
- Review seafood processor protection plans and implement specific plans to protect the water intakes from any spilled oil.
- 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice 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 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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort.

b. Vessels, Skimmers, Boom, and other Spill Response Equipment: 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 include, but is not limited to the following:
   - Skimmers: Transrec 200, Desmi ocean, Foxtail, Lori side collection, Dynamic inclined plane, Vikoma SS50, Desmi 250 and Transrec 250
   - 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 also in local inventories.
   - Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 are located in 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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

c. Personnel: Initial personnel activation will require several hours to days. The Aleutians Subarea, 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.

8. Resource Availability and Resource Procurement:

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 the spill cooperatives 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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. Firefighting 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 issues):
   1. Housing – Local hotels, seafood processing facility man camps, on-water vessels and barges will be required to sustain the 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 of Alaska.

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 in the immediate area. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.
4. Transportation: Dutch Harbor is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported overwater or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.
5. Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 incident area.

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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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:

- 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 MOST PROBABLE CASE SCENARIO

The maximum most probable case is determined by the largest recorded oil spill to date in the Aleutians Subarea. The largest to date was the M/V Selendang Ayu on December 8, 2004. During this event, a total of 321,052 gallons of IFO 380 and 14,680 gallons of diesel were released. Due to the large size of this spill, the response actions for the maximum most probable and the worst case scenarios will not differ very much.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case for this subarea would likely be a fishing vessel that either sinks, goes aground, or otherwise creates a pollution event through the release of non-crude oil (most likely diesel). Many of the response actions outlined in the worst case scenario would remain the same, although the need for out-of-region response equipment, activation of a Unified Command, Joint Information Center, and deployment of federal and state resources would not be at the same scale. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

SCENARIOS: PART TWO – HAZMAT

Event Description: The incident occurred on May 5. Toward the end of night shift (at 8:45 AM), during an ammonia transfer operation a "liquid hammer" occurred in the high pressure (HP) receiver. As a result of the liquid hammer a Sight Glass on the level column began to leak at the bottom of the HP receiver. The refrigeration technician first attempted to isolate the leaking Sight Glass. The technician was quickly overcome by the ammonia and left the area because of discomfort even though he was using respiratory protection. When the anhydrous ammonia release occurred, a fixed ammonia air monitor sounded an audible alarm. The liquid ammonia release is ongoing. Refrigeration people ran into the fish processing area to report the leak and clear the area after they sounded the facility evacuation alarm. During the resulting evacuation of the building, several people were overcome by the ammonia. The anhydrous ammonia release occurs at a rate of 60 lbs/min over a period of approximately one hour, for a total of 3600 lbs.

Location: The incident occurred at a seafood processing facility in Dutch Harbor, approximately 1 mile east-northeast of the City of Unalaska.

Release Information: Over a period of approximately one hour, approximately 3,600 pounds of anhydrous ammonia is released into the atmosphere. The volume released begins to slow after an hour, as the entire contents of the receiver have either been emptied or emergency shutoff valves successfully isolated the release.

Time of Year: May

On-scene Weather: Winds: Westerly at 6 mph; Temperature: 50°F; Relative Humidity: 87%; Cloudy, overcast, with showers forecasted

Sensitive Areas at Risk: Intertidal spawning salmon (May thru Sept); waterfowl concentrations; eagle nesting; seals; employees at the seafood processing facility; Small Boat Harbor; City of Unalaska and local residents.

Initial Actions:

- Initial call taken by the Unalaska Fire Department, and up-channel reporting in initiated.
- Determine and confirm personnel safety hazards in the immediate area and downwind of the ammonia release.
- Ensure public health and safety by either evacuating populace at risk or directing them to shelter in place.
- Immediate notification of ADEC via the Spill Report Hotline. Captain of the Port, Western Alaska, also receives notification simultaneously from the Marine Safety Detachment in Dutch Harbor, followed by notification from the National Response Center. Follow-on federal/state/local agency notifications are made based on the Emergency Notification List in the Response Section.
- ADEC notifies the Statewide Hazmat Response Team of the situation and the need for possible deployment.
- ADEC also notifies Aware Consulting, and activates a term contract with them for technical advice on dealing with the ammonia release and post-incident investigation.

- Activate response structure including local responders and the Statewide Hazmat Response Team.
- Contact FAA to restrict airspace.
- Prepare initial press release.
- Due to the threat to public health and safety, the initial Incident Commander or a representative from the City of Unalaska will continue to serve as a member of the Unified Command until the threat is abated.
- Commence mobilization of response personnel.
- Incident Command System activated, and Unified Command formed.
- COTP directs the MSD to establish a Safety Zone around the facility.
- USCG drafts POLREP One. ADEC drafts and releases initial SITREP.
- USCG issues Letter of Federal Interest. ADEC issues Notice of State Interest in a Pollution Incident.
- Issue Letter of Designation.
- State of Alaska alerts additional response action contractors for possible activation, and also alerts other members of the Statewide Hazmat Response Team for additional support, if required.
- Determine if the Hazmat response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC Historic Properties Specialist.

Initial On-Scene Investigation/Inspection Evaluation and Recommendations:

- Develop information from facility worker reports, release size, utilize video recording as much as possible to document scene and develop initial response strategy.
- Determine overall system capacities for anhydrous ammonia, and determine potential for additional releases, in consultation with the facility manager and refrigeration specialist.
- Collect charts and refrigeration system maintenance and resupply files for evidence.

Containment Countermeasures and Cleanup Strategies: The Unified Command will coordinate and develop an Incident Action Plan to:

- Conduct initial containment,
- Establish the initial on scene command post and staging area.
- Support local responders, and provide updated information to Federal, State, local, and tribal entities.

Resource Requirements: Due to the short nature of the release, the Statewide Hazmat Response Team will likely be stood down after determination that the ammonia release has stopped. The team will remain on standby pending any further releases that may be prolonged in nature. The Aware Consulting staff person will be mobilized to Dutch Harbor along with several ADEC responders to provide additional support to the local responders.

Response Requirements:

a. Equipment: Any action to contain, plug or prevent additional release will require the use of appropriate personal protective equipment (PPE).

b. Personnel: Personnel responding to this incident (local firefighters, and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

Shortfalls:

a. Equipment: The City of Unalaska does not maintain a Level A entry capable Hazmat Team. Level A PPE is not available in Unalaska, aside from limited pieces of equipment maintained by the seafood processing facility.
b. Personnel: Due to the location of the accident and the localized hazard (i.e., anhydrous ammonia release over an hour's period), additional emergency response personnel are not deemed necessary, unless the release recurs over a prolonged period of time.
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. Based on the location of the incident, the RP, local fire chief, and USCG will initially respond to the situation. The FOSC, SOSC, and Aware Consulting representative (all deploying from Anchorage) is expected to arrive at the scene by early afternoon.

Spill Cleanup Timetable: This response should last no more than several days. Cleanup of the immediate area will be required, and may simply consist of facility ventilation. The RP indicates that he/she will direct a complete inventory of the ammonia refrigeration system, and determine the potential for any potential releases. ADEC directs the Aware Consulting ammonia specialist to assist with the inventory and conduct a thorough inspection of the system to determine the cause of the release and potential for future ammonia releases.

Cleanup Termination: The FOSC and SOSC will determine the appropriate time to terminate operations based on the RP's ability and assurances that further releases will not occur. The investigation into the cause of the release will continue after response termination.

SCENARIOS: PART THREE - INLAND OIL

NOT USED

BRISTOL BAY

SCENARIOS

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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 ADEC Spills Database and the NOAA Scientific Support Coordinator 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.

Deliveries of noncrude oils are made to the villages in this area primarily by barges operating from Dutch Harbor or the Cook Inlet Region. Deliveries are ice dependent and do not occur as ice forms. Delivery of non-crude oil is made to the remote villages in this area primarily by small barges.

C. VULNERABILITY ANALYSIS

The natural habitats of the Bristol Bay Subarea support extensive fish and wildlife populations that are extremely important to the social, economic, and cultural welfare of local residents. Offshore areas support a highly productive marine ecosystem, rich with intertidal, benthic, and pelagic plant and animal life that, in turn, provides nourishment for extensive populations of marine and anadromous finfish, shellfish, seabirds, and marine mammals. Rocky shorelines and cliffs provide nesting areas for seabirds.

There are a total of 30 communities in the region (including the two boroughs), 27 Native and 3 non-Native. Bristol Bay is the world's largest sockeye salmon fishery and the state's largest salmon fishery, which is by far the dominant enterprise in the region. Dillingham and Naknek are the major fish processing areas as well as the main ports, although fishing fleets work out of numerous smaller communities also. Noncommercial harvest, including subsistence, is another major activity especially important in areas with no direct connection to the commercial fishing and processing industry.

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.

An overview of oil fate analysis can be found in Section E, Part 3, D (Oil Fate and General Risk Assessment) of this plan

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D. SEASONAL CONSIDERATIONS

See Part Three of the Background Section of this plan for information on wind, ice and current conditions and spill trajectory modeling.

SCENARIOS: PART ONE - COASTAL OIL

A. WORST CASE SCENARIO

Size of the Discharge: 400,000 gallons (of the 725,000 total capacity) of a barges cargo.

Event Description: The fuel barge planning to refuel the Alaska Village Electric Cooperative facility site in Naknek strikes a partially submerged object en route to the marine header. The object struck is unknown. The vessel grounds on the struck object and immediately begins discharging product into Kvichak Bay. Six of the eight tanks are compromised and discharging product.

Location: Approximate position- Latitude 58° 44'N; Longitude 157° 05'W.

Spill: There is a steady release of fuel oil (4,000 gals/day) for two days, then a slower release of 1,500 gals/day for the next several days. The vessel was carrying a total of 375,000 gallons of #2 Diesel, 250,000 gallons of gasoline and 100,000 gallons of Jet Fuel.

Cargo Salvage: The ship is determined to be salvageable; lightering is weather dependent.

Date: March 25

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

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 Cape Chichagof and Egegik. In addition, several downstream communities 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 ensure the following are notified:

   ** ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
   * ADNR
   * ADF&G
   * ADMVA, DHSEM
   ** 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
   ** DOI
   ** NRC, National Response Center
   *** NOAA SSC, Scientific Support Coordinator
   ** NSFCC, National Strike Force Coordinating Center
   ** NPFC, National Pollution Fund Center
   *** Bristol Bay Borough
   *** Local Emergency Managers of directly impacted communities
   *** Federally-recognized tribes in impacted communities

   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 the 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.
   - Request immediate helicopter support through D17 OPCEN to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated. Request USCG cutter support 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.
   - Consult with DOI, DOC, and State of Alaska on potential resources at risk.
   - Conduct Endangered Species Act consultation with DOI and DOC.
   - Activate FOSC's Historic Properties Specialist.

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.
- Determine cargo and fuel capacities. Contact last port if immediate cargo amounts are unknown.
- Collect charts and log books for evidence.
- Determine fuel 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 Incident Command Post (ICP), if it is established in the field. If no ICP is established, consider using USCG Sector Anchorage conference room as the initial Command Post while USCG/ADEC personnel are enroute to the field Command Center.

4. Initial Response Actions

- Secure the source, if possible.
- Take actions to stabilize the vessel. Notify USCG Marine Safety Center of vessel information and situation. Request stability information.
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas. Utilize established Geographic Response Strategies (GRS), when possible.
- Evacuate any injured personnel or unnecessary crew members.
- Using **Unified Plan, Annex B** Implement some or all of the Incident Command Systems (ICS) principles listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available).
    - Evaluate RP'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- Plan for Naknek or King Salmon.
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- 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, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.
- 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.
- 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).
- Determine any fisheries impacts, and take appropriate action.

- Consider alternatives to mechanical response: dispersant application, *in situ* burning, or destruction of entire vessel and cargo by burning.
- Schedule routine overflights of the impacted area. Request USCG support in developing an aviation operations plan for the spill to control air traffic in the area.
- 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

A spill of this magnitude would not normally 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice 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 the 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 National Pollution Funds Center (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.

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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. A complete list of available equipment for the Bristol Bay subarea is located in the Resources Section of this plan. Equipment stored and readily available in Dillingham by Alaska Chadux Corporation (ACC) is located at: http://www.chadux.com/dillingham.html.

b. Vessels, Skimmers, Boom, and other Spill Response Equipment:

(1) 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 include, but are not limited to the following:

Skimmers

- Lamor 30
- Lamor 12
- Manta Ray
- Skimpak 1800
- Desmi Minimax
- Vikoma 12K
- Rovac

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 also in local inventories.

Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 are located in Kodiak, English Bay, Port Graham, Homer, Kenai, and Seldovia all have sizable vessel of opportunity fleets. Seldovia Oil Spill (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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

Personnel: Initial personnel activation will require several hours to days. The Bristol Bay subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities.

8. Resource Availability and Resource Procurement

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 the spill cooperatives 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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 issues):

(1) Housing – Local hotels, seafood processing facility mancamps, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the subarea. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Dillingham and King Salomn are the only major commercial airports located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported over water or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 24-hours of the incident report, pending favorable

weather. The response to this spill will depend heavily upon the sea state and weather in the incident area.

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 waste 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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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

The maximum most probable case is determined by the largest recorded oil spill to date in the Bristol Bay subarea. The largest to date was the sinking of a local fishing vessel in Levelock on the Kvichak River. During this event, a total of 3,000 gallons of diesel were released.

Size of the Discharge: 3,000 gallons (of the 4,500 total capacity) of a vessels capacity.

Event Description: The fishing vessel Salmon Ho suffers a marine casualty where the sea-chest valve fails, causing uncontrolled flooding. The crew abandons ship into a life raft and is rescued by a good-samaritan vessel. The F/V Salmon Ho sinks, and immediately starts to discharge all remaining fuel onboard.

Location: Approximate position - Latitude 58° 49' N, Longitude 158° 32' W.

Spill: Approximately 3,000 gallons of diesel are released over a one-hour period.

Cargo Salvage: No cargo salvage is conducted as the vessel is completely submerged.

Date: April 10

On-scene Weather: Winds: E @ 20 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

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 are not expected to be impacted from this spill. The Sensitive Areas Section provides a framework for identifying any at-risk resources.

Initial Action Description:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene.

3. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:** Dispatch pollution investigators (Sector Anchorage and DEC CART) 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. All information must 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.

4. **Initial Response Actions:**
    - Dispatch rep from SECTOR Anchorage and DEC CART (Anchorage) as needed
    - Ensure health and safety of personnel
    - Complete notification procedures
    - Activate the response structure to the level deemed necessary
    - Consult with DOI, DOC, and State of Alaska on potential resources at risk.
    - Conduct Endangered Species Act consultation with DOI and DOC.
    - Through SSC interaction, determine spill path, resources at risk and wildlife impacts
    - Prepare Initial POLREP (USCG)
    - Prepare Initial SITREP (State)
    - 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).
    - FOSC/SOSC will operate from offices and will not travel to the scene
    - 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 cleanup impractical?

        3) Can equipment be deployed without excessive risk to the life and health of personnel?

5. **Spill Response Organization:** Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, RP's Incident Commander, and local community liaison. 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.

6. **Containment, Countermeasures and Cleanup Strategies**: Immediate containment is required to mount an effective recovery operation. Due to the small amount of fuel spilled, boom from the local community could be used to contain the majority of the fuel.

   Natural dispersion and evaporation will act to remove the product from the water surface. A spill of this volume will spread, disperse, and evaporate making recovery, if not initially contained, very difficult.

   In situ burning and dispersant strategies will not be employed.

   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 may make "chasing" this oil spill infeasible.

7. **Response Requirements:**

   a. **Equipment:** The equipment required in the State and Coast Guard facility response plans should adequately address this spill. It is unlikely that additional equipment can be brought to bear in a timely manner and at a reasonable cost to respond to this spill volume. Natural processes will drastically reduce the spill volume in a matter of hours rather than days.

   b. **Personnel:** Expect to use only local personnel for this response. The crew should be capable of deploying equipment and recovering product without assistance. Trustees and other agencies should not require augmentation or additional manpower to deal with this spill.

8. **Resource Availability and Resource Procurement:** Resources should be on hand to deal with this spill. The volume of product that can be expected to be recovered will be relatively small and additional resources will probably be unnecessary by the time they arrive on scene.

9. **Shortfalls**

   a. **Equipment:** None anticipated.

   b. **Personnel:** None anticipated.

   c. **Funding:** No funding problems anticipated.

   d. **Minimum Response Times:** Vessel owner should comply with FOSC/SOSC response time guidance.

10. **Spill Cleanup Timetable:**

    a. **Mechanical Cleanup Only:** Two days.

    b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

11. **Disposal Options:** Debris disposal is the responsibility of the RP. A small volume of oil contaminated debris will likely be produced. The RP must dispose of contaminated debris according to existing laws. The RP will typically be knowledgeable in the methods and requirements for disposing of small quantities of oiled debris.

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, adjoining shorelines, or 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 and welfare; and activities required to repair unavoidable damage resulting from removal actions have been performed.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case is determined by the greatest percentage of average spills in the area over the past ten years. For the Bristol Bay Borough, over 50% of oil spills were less than 10 gallons with storage facilities accounting for 90% of spill locations.

Size of the Discharge: Approximately 50 gallons of No. 1 diesel fuel.

Event Description: A lightering vessel is transferring fuel to the Egegik AVEC bulk fuel storage facility when the 4 inch transfer hose ruptures near the marine header.

Location: Approximate position - Latitude 58° 13' N, Longitude 157° 22' W.

Spill: Approximately 50 gallons of arctic diesel.

Cargo Salvage: Upon discovery of the rupture, the transfer pump is secured and the valves at the marine header and aboard the lightering vessel are closed, preventing the loss of additional cargo.

Date: April 10

On-scene Weather: Winds: W @ 25 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

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 are not expected to be impacted from this spill. The Sensitive Areas Section provides a framework for identifying any at-risk resources.

Initial Action Description:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene.

   a. Initial Response Actions On-Scene:
   - Alert vessel tankerman to secure pumping
   - Secure electrical power and sources of ignition
   - Close valves to prevent the flow of fuel through the ruptured hose
   - Maintain a safety zone due to health hazards; evacuate personnel as necessary

- Ensure proper PPE is available and used by responders
- Alert the Bristol Bay Borough to activate the initial ICS
- Contain and recover the charged product
- Properly dispose of recovered oil and oily waste
- Properly decontaminate all oiled response equipment
- Consult with DOI, DOC, and the State of Alaska on potential resources at risk and the need for Endangered Species Act consultation with DOI and DOC.

b. Initial Agency Evaluation and Recommendations:

- FOSC/SOSC/RP establish direct communications
- Evaluate the RP's response capabilities
- As required, dispatch representatives to the scene at the earliest opportunity
- Ensure health and safety of all individuals
- Consult with natural resource trustees on the protection of sensitive areas and resources.
- Receive recommendations from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program).
- Coordinate with local emergency response personnel to establish a Safety Zone, as necessary
- Determine feasibility of removal actions based on the following considerations:

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 cleanup impractical?

3) Can equipment be deployed without excessive risk to the life and health of personnel?

- Ensure development of a Site Safety Plan
- Prepare initial POLREP (USCG)
- Prepare initial SITREP (State)

3. Spill Response Organization: No command structure will be needed for a spill of this size. USCG and State DEC will monitor and dispatch personnel as needed.

4. Containment, Countermeasures and Cleanup Strategies: Due to the small amount of discharged product, nature of diesel fuel, and weather conditions, the product will likely weather quickly through evaporation and emulsification. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product through the hose and contain the spill.

5. Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Facility personnel and other emergency response personnel will likely be the most crucial individuals in this scenario.

6. **Resource Availability and Resource Procurement.** The RP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the RP to respond to this event. In the event the RP does not have adequate equipment, the Bristol Bay Borough maintains some response equipment that may be available, through appropriate agreements, for this scenario. Out-of-region resources are not considered necessary for this response.

7. **Shortfalls**

   a. **Equipment:** No shortfall of cleanup equipment is anticipated.

   b. **Personnel:** No shortfalls in personnel are anticipated.

   c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.

   d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

8. **Spill Cleanup Timetable:**

   a. **Mechanical Cleanup Only:** One day.

   b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

9. **Disposal Options:** Debris disposal is the responsibility of the RP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The RP will typically be well versed in these procedures due to the nature of their fuel handling operations.

10. **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, adjoining shorelines, or 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 and welfare; and activities required to repair unavoidable damage resulting from removal actions have been performed.

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SCENARIOS: PART TWO – HAZMAT

Situation: A seafood facility in Naknek sustains an ammonia release due to a valve failure. Approximately 1,500 pounds of anhydrous ammonia is released from the facility and threatens the local community.

Location: Naknek, 58°43.97'N 157°01.20'W.

Release Information: The ammonia cloud exits the facility and proceeds to move downwind towards the populated area of Naknek.

Sensitive areas at risk: General population at Naknek.

Date/Time: May - 8:30 am.

On Scene weather: Temp: mid 30's, overcast with light rain, winds: westerly at 15 knots.

Notifications. The ADEC is notified of the situation by the Bristol Bay Borough emergency services personnel. The ADEC notifies the Coast Guard (Sector Anchorage) FOSC of the situation. They proceed with notifying other Federal agencies. ADEC notifies other state agencies. Because the release poses a life-threatening situation, the ADEC activates the Statewide Hazmat Response Team in Fairbanks, Kodiak and Anchorage, and also places an ADEC term contractor on alert. The Coast Guard FOSC may have EPA activate their contractor as well to provide technical support to the team. The ammonia technical advisor is also placed on alert and requested to provide any additional technical assistance. The initial response team will be composed of an ADEC representative, the Coast Guard FOSC, a member from EPA and a contractor representative, a member of the Statewide Hazmat Response Team, and possibly an ammonia technical advisor The follow-on team will consist of members of the Statewide Hazmat Response Team and other support personnel.

Initial Response Actions. The initial response team in Anchorage gathers basic equipment and departs for the scene via commercial or charter air, whichever is most expedient.

The FOSC and SOSC notify the facility owner of their responsibilities to contain and control the release. The Responsible Party indicates that the facility's response capability is extremely limited and they will not be able to re-enter the facility to control the source. The State and Federal OSCs reach an agreement with the Responsible Party and borough emergency response officials to take whatever measures necessary to respond to the release.

Equipment Mobilization and Deployment. The follow-on Statewide Hazmat Response Team has marshaled their team and equipment in Anchorage and are ready to deploy via charter aircraft to King Salmon. Estimated time of arrival of the team is anticipated to be sometime in the early afternoon.

Public Protection. Local protection priorities in Naknek include: Ensure protection of the general public through sheltering in-place or evacuation to a safe location

Response Actions. Local emergency response officials immediately notify the local populace to shelter in-place if possible. Detailed shelter in-place instructions are provided over the radio and public address system. If evacuation becomes necessary, local officials have determined an appropriate process for evacuating the general public via a safe route to a pre-determined area.

Upon arrival of the initial response team, emergency response personnel in proper PPE and equipped with ammonia detectors are tasked to deploy and monitor readings downwind from the release.

The ammonia technical advisor reviews the plant schematics with the plant manager, and attempts to determine the approximate location of the release source. An entry plan is developed prior to the arrival of the Statewide Hazmat Response Team.

Upon arrival of the team, a three-stage entry process is determined to be the best approach. The first entry will be to ventilate the facility using portable, positive pressure ventilation fans. The second entry team will determine the location of the release source, and the third team will secure the source by closing off upstream valves.

Personnel who may have been exposed to the ammonia vapors will be treated locally or airlifted to the nearest hospital, depending on the nature of their injuries.

Clean Up and Recovery. Upon securing the source, the Statewide Hazmat Response Team will be released back to their normal work location (Anchorage, Kodiak or Fairbanks). The EPA contractor and the ADEC contractor will continue with periodic air monitoring until the facility owner is able to effect permanent repairs to the ammonia refrigeration system.

SCENARIOS: PART THREE – INLAND OIL

A. WORST CASE SCENARIO

This scenario is based on the Facility Response Plan for the Igiugig Village Council tank farm.

Size of the Discharge: 24,600 gallons diesel

Event Description: Tank V6 at the Igiugig Village Council tank farm sustained a catastrophic failure of unknown cause in the early morning hours of September 20th resulting in a substantial discharge of diesel. Additionally, there was failure of secondary containment allowing a large amount of the fuel to escape containment. It appears that a valve on the secondary containment berm was open. The tank was full at the time of the release and the entire contents were lost. The Kvichak River is approximately 100 feet from the tank farm, and there is visible fuel in the river.

Location: Igiugig, AK, Latitude 59° 20'N; Longitude 155° 54'W.

Spill: Approximately 24,600 gallons diesel with 10,000-15,000 gallons released outside of secondary containment. Much of this volume has penetrated the soil or traveled to the Kvichak River.

Date: September 20

On-scene Weather: Temp: High 40° F, Low 20° F; Winds: SW @ 15 mph;
Precipitation: The region has been experiencing heavy rainfall, receiving 3 inches of rain in the previous 48 hours. Additional rain is forecasted for the next 3 days.

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 immediate area of the spill that are at risk include the Kvichak River, and the waterfowl and fish species that utilize these waters. The Kvichak River near Igiugig consists of many islands and bars, breaking the river into multiple narrow, shallow channels. Assuming a two-knot current, it is anticipated that the extent of fuel will reach Bristol Bay, 60 miles downstream, 26 hours after fuel enters the river. The actual current may be faster.

The Kvichak River System, including the Alagnak (Branch) River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area. All five species of Pacific salmon spawn in the river and its tributaries. During the month of September, Coho salmon are found in the river. These salmon are important subsistence food source. September is also a key time for fishing in the only designated Trophy Rainbow Trout area in Alaska. Commercial and subsistence fishing sustain the community. Seven sportfishing lodges are located near Igiugig.

The land surrounding the Kvichak River is an important breeding area for migratory waterfowl, and some late migrating birds are still in the area.

Initial Action Description:

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

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 impacted communities
*** Federally-recognized tribes in impacted 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.
- 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 Kvichak 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 CART) 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 prior to reaching Kvichak River; in the waters of Kvichak River; and potentially in Bristol Bay.

Initial Response Actions:

- *Secure the Source. The secondary containment area is sealed/valve closed to prevent additional discharge. The facility response team and additional local/regional resources are activated.*
- *The Federal/State Unified Plan and Bristol Bay 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 the U.S. EPA warehouse in Anchorage, AK. Additional initial Unified Command tasks include:
    1. Evaluate PRP'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- Plan for either Naknek or King Salmon.
    6. 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 clean up 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 established Geographic Response Strategies (GRS), when possible (available only for coastal areas).
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
- Establish local (Anchorage) command post while individuals are en route to the field command post and plan for relocation to the Bristol Bay region.
- 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 impacted 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:
    - EPA will maintain the FOSC throughout the spill response due to the largest impacts occurring in the inland zone. USCG Sector Anchorage would be requested to assist with response activities in the coastal zone.

- 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 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. 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 the tank farm's Facility Response Plan, response tactics to contain and cleanup the spill are implemented. Primary objectives are:
  - Prevent oil from reaching the Kvichak River. Containment dikes and trenches using handtools and earthmoving equipment will be contructed.
  - Prevent oil from traveling downstream and entering Bristol Bay. Sorbent Boom applied at the point(s) of entry into the river and additional points downstream as current and terrain allow.

  Tactics to achieve these objectives include:
  - Contain spill on land, to extent possible, with containment dikes and trenches constructed using handtools and earthmoving equipment
  - Use booms to contain oil at point of entry and in side channels of the Kvichak River.
  - Recovery of oil in river using sorbent material (sweeps and booms).
- 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:

a. **Equipment:** The nearest equipment will be located at the tank farm facility. This equipment will need to be augmented with additional equipment, including but not limited to boom, vacuum units, super suckers, earth moving equipment and other oil recovery equipment to insure timely recovery. It is possible that additional equipment can be brought in a timely manner from regional partners, but it will likely be shipped in from Anchorage, via King Salmon.

Quick deployment of containment measures, high volume oil recovery equipment and other mechanical collection equipment is essential to ensure success of the response and to mitigate spill damage. A spill of this size and location will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. Section B of this plan (Bristol Bay SCP) includes a list of some of the equipment available in or deployable to the Bristol Bay subarea.

b. **Personnel:** Initial facility response personnel would likely have to be augmented by local and mutual aid partners. The facility crews should be capable of deploying equipment and recovering product with assistance of other partners.

c. **Additional Mobilization of Government Personnel:** This scenario contemplates a response beyond the ability of the facility and local personnel. In such an instance the Federal On-Scene Coordinator and State On-Scene Coordinator will provide oversight of the response through the Unified Command. Additional federal and state agencies with roles and responsibilities in the federal and state response systems as detailed in the National Contingency Plan and the Alaska Unified Plan will be integrated into appropriate sections within the incident command system. The following provides examples of such integration but is not meant to be totally inclusive of all-possible roles and responsibilities for assisting agencies.

Operations oversight of field teams will be accomplished by placing government monitors from EPA, US Coast Guard's Pacific Strike Team, and ADEC personnel with industry task forces.

Shoreline Clean up Assessment Teams utilized to survey spill impacted areas and recommend treatment methods will be composed of EPA, ADEC, state land managers, cultural resource specialists and industry representatives. Composition of teams will follow general guidance found in NOAA HAZMAT publications and other pertinent documents.

Individuals from USFWS and ADF&G will monitor wildlife teams involved in hazing and capture.

The Incident Management Team's planning section will be supplemented with technical specialists from the following government agencies;

- Waste Management - EPA / ADEC
- Wildlife Protection – USFWS / ADF&G

- Cultural Resource Protection – Federal & State Cultural Resource Contract Specialists
- Land Management – ADNR

These personnel will facilitate the overall response operation by assisting the FOSC and SOSC in authorizing and permitting activities under their jurisdiction when appropriate. This is not an all-inclusive list.

Resource Availability and Resource Procurement.
For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (EPA, USCG, State of Alaska, Igiugig Village Council) that would allow the resources of the spill cooperatives 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. A communications network is already in place and available for immediate usage.

Procuring the resources identified in this spill response is the PRP's responsibility. A spill of this magnitude would likely exceed $100,000 per day during the initial stages of the response. Committing this volume of funds in a short time is essential. Failure, on the part of the PRP, 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 PRP is unable or unwilling to pay the costs of the spill response. 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

a. **Equipment:** The primary equipment shortages are expected to in regards to specialized transportation equipment: helicopters and air boats. Adequate PPE on or near water will also be a concern and not initially available in adequate quantities. "Mustang" suits, float coats, dry suits, or inflatable PFDs will be preferable for sustained operations compared to cool weather clothing plus a standard PFD.

b. **Personnel:** None anticipated.
(1) Housing – Nearest available housing is likely in King Salmon and Naknek. On-site "field camps" will be required to sustain the response. Several organizations in Alaska cater "field camp" setups which include housing and feeding facilities. These facilities are available in flyaway form. However, these camps may have limited availability/already be in use in late September. It is expected that field camp facilities for housing, dining and work space will need to be transported to the site from vendors in the Lower 48. This may take several days to arrange, transport and set-up. Additional considerations for a field camp will include water, electricity and heating. Depending on the location(s) of field camps, existing gravel pads may not be sufficient for staging. Arrangements will need to be made with ADEC and industry for the construction of additional gravel pads or re-siting camp and staging area locations.

(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. However, catering service may need to be brought in from Anchorage, AK.

(3) Fuel –Arrangements for remote fueling stations would need to be arranged to supply the vehicles and equipment operating in the area.

(4) Transportation: King Salmon is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. Dillingham is an alternate airport in the Bristol Bay region in the event that flights into King Salmon are unavailable. The Kvichak River is navigable from Bristol Bay, with Naknek serving at the port for any vessels traveling upriver. Favorable weather conditions are also a major factor in transportation for personnel and equipment.

Air Transportation: Helicopters will be required to transport personnel to areas inaccessible by boat or ATV. Fixed wing aircraft may be utilized for overflights to assess conditions, but will have limited functionality in other response activities.

Boats: The Kvichak River is navigable from Bristol Bay, with Naknek serving at the port for any vessels traveling upriver. The number of readily available boats, capable of handling the conditions of the Kvichak River will likely be limited and arrangement for the procurement and hiring of these boats will need to be addressed in the response.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

c. **Funding:** Funds availability and access should pose no problem regardless of the financial capabilities of the PRP. 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:** Emergency response personnel should respond as soon as possible to the spill site with safety parameters in mind. Travel into Iguigig is by charter flight or boat and expected to be 1-2 hours minimum for arrangements plus travel time from King Salmon. Flight time from Anchorage to King Salmon is 1 hour 20 minutes.

Spill Cleanup Timetable:
The spill response will continue until all recoverable oil is collected. Riverbank and shoreline cleanup will begin immediately. On-land cleanup will continue until all recoverable oil is collected and satisfactory soil cleanup levels are reached, as determined by ADEC. The initial response phase is expected to transition to a management phase after 1 month. Shoreline cleanup will continue until freeze-up.

Ongoing monitoring may continue beyond this period. Depending on the extent of oil released into surrounding tundra and muskeg or to wetlands adjacent to the Kvichak River, oil may continue to leach out for an extended period of time, and would require monitoring.

Disposal Options:
Debris disposal is the responsibility of the PRP. 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 PRP must present a waste 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 large volume of oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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:

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. AVERAGE MOST PROBABLE CASE SCENARIO

> In the Bristol Bay Borough, over 50% of oil spills were less than 10 gallons, however, a small release such as this is unlikely to require outside resources to respond to the spill. This scenario is designed to be a typical spill that would require response assistance beyond of immediately available and local resources.

Size of the Discharge: 2,500 gallons of No. 1 diesel fuel.

Event Description: A valve was left open on a tank at the Alaska Village Electric Cooperative (AVEC) tank farm in New Stuyahok. In addition, the valve on the secondary containment was found to be open, allowing a release of approximately 2,500 gallons of diesel to the environment. There is an accumulation of diesel on the surface of the adjacent sewage lagoons. Diesel has also traveled over ground to the Nushagak River, 550 feet from the facility. Fuel has also accumulated in ditches along Birch Street and along the pipeline route which runs between the facility and river, adjacent to the school grounds.

Location: Approximate position - Latitude 59° 29' N, Longitude 157° 20' W.

New Stuyahok is located on the Nushagak River, 12 miles upstream from Ekwok and approximately 80 miles upstream of Dillingham (52 miles northeast of Dillingham by air).

Spill: Approximately 2,500 gallons of diesel.

Date: June 10

On-scene Weather: Temp: High 58° F, Low 35° F; Winds: SW @ 15 mph;
Precipitation: None.

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 immediate area of the spill that are at risk include the Nushagak River and the waterfowl and fish species that utilize these waters. Assuming a 2 knot current, is anticipated that the extent of fuel will reach the marine and/or tidally influenced waters of lower Nushagak River and Nushagak Bay approximately 75 miles downstream, 37.5 hours after fuel enters the river.

The Nushagak River System is an important source of salmon in the Bristol Bay area, with all five salmon species spawing in the river. Commercial, subsistence and sport fishing are important in the area. Most notable is the annual run of King (Chinook) Salmon which occurs from mid-June to mid-July.

The area surrounding the Nushagak River is an important breeding area for migratory waterfowl, which will be migrating in/through the area at this time and breeding in the vicinity.

Initial Actions:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene. Begin recall of local in-house personnel (EPA, ADEC, ADNR, etc.) as needed to support a spill of this magnitude.

3. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:**
   - Dispatch representatives to the scene at the earliest opportunity.
   - FOSC/SOSC/PRP establish direct communications
   - Ensure health and safety of all individuals
   - Coordinate with local emergency response personnel to establish a Safety Zone
   - Evaluate the RP's response capabilities

4. **Initial Response Actions On-Scene:**
   - Stop any discharge from the truck, if possible
   - Maintain a safety zone
   - Ensure proper PPE is available and used by responders
   - Activate the response structure to the level deemed necessary
   - Establish a command post
   - Evaluate PRP's initial actions and evaluate capability to carry out response
   - Prepare Initial POLREP (EPA)
   - Prepare Initial SITREP (State)
   - Ensure development of a Site Safety Plan
   - As required, dispatch representatives to the scene at the earliest opportunity (EPA and/or State)
   - Determine feasibility of removal actions based on:

     a. Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?

     b. Can cleanup be initiated before the pollutant disperses, making cleanup impractical?

     c. Can equipment be deployed without excessive risk to the life and health of personnel?

Spill Response Organization: No command structure will be needed for a spill of this size. USCG and State DEC will monitor and dispatch personnel as needed.

Containment, Countermeasures and Cleanup Strategies: Due to the small amount of discharged product, nature of diesel fuel, and location the majority of release product is expected to be on land and in the sewage lagoon. Terrestrial containment and diversion measures are the primary containment and control techniques, with boom deployed at the point of entry(s) into the river. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product by closing the open valves.

Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Facility personnel, additional AVEC personnel, and other emergency response personnel will likely be the most crucial individuals in this scenario. AVEC contracts with Chadux for spill response support. Additional personal and equipment will be procured for the response through Chadux.

Resource Availability and Resource Procurement. The PRP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the PRP to respond to this event. In the event the PRP does not have adequate equipment, ADEC maintains some response equipment that may be available, through appropriate agreements, for this scenario. A contractor will likely be procured to assist the PRP with the response and cleanup.

Shortfalls

a. **Equipment:** N o shortfall of cleanup equipment is anticipated.

b. **Personnel:** No shortfalls in personnel are anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.

d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

Spill Cleanup Timetable:

a. **Mechanical Cleanup Only:** Cleanup likely by mechanical means. It is expected that cleanup will be complete by the end of summer.

b. **Mechanical in Conjunction with Non-Mechanical:** Non-mechanical options are not considered viable for response to this scenario.

Disposal Options: Debris disposal is the responsibility of the PRP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The PRP will prepare a cleanup/waste disposal plan and submit to ADEC for approval.

Cleanup Termination: 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, adjoining shorelines, or 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 and welfare; and

d. Activities required to repair unavoidable damage resulting from removal actions have been performed.

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COOK INLET SUBAREA CONTINGENCY PLAN

SCENARIOS SECTION

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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. <u>Initial Response Actions</u>

- 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 SOSC, 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 where 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 an 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.

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INTERIOR ALASKA SUBAREA CONTINGENCY PLAN

SCENARIOS SECTION

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SCENARIOS: PART ONE – OIL & PETROLEUM PRODUCTS

A. WORST CASE SCENARIO

This scenario is based on scenarios in the Alyeska Pipeline Service Company, Trans Alaska Pipeline System Pipeline Discharge Prevention and Contingency Plan (C Plan).

Date: July 15

Size of Discharge: 60,000 barrels of crude oil

Location: Burbot Creek at PLMP 351.8. (65° 53.6' North, 149° 44.1' West)

Spill Information: Approximately 60,000 bbls (2,520,000 gallons) of crude oil has been released to land and water. A large of oil amount has entered Burbot Creek and the Yukon River.

Scenario: Pipeline leak in the Trans-Alaska Pipeline System (TAPS) due to a structural failure of a longitudinal weld resulting in a guillotine cut in section of aboveground pipe. Multiple valves fail to close for 120 minutes due to a communications link failure. 60,000 barrels (bbls) of oil are released from the pipeline by the time the valves are manually closed. The oil drains into Burbot Creek, which empties into the Yukon River 1 mile southwest of the pipeline crossing.

Hydrology: The water level in the Yukon River is low. The current in Burbot Creek is 0.25 feet per second (fps). Current in Yukon River 3-6 fps (2-4 miles per hour).

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 immediate area of the spill that are at risk include the Yukon River, and the waterfowl and fish species that utilize these waters.

The Yukon River is an anadromous fish stream and is considered critical habitat. Moose are widely distributed in this area. A concentrated nesting habitat for the peregrine falcon and other raptors is located along the Yukon River, downstream of the Yukon River Bridge. Activity in this area after April 15 is restricted.

On-Scene Weather: Temp: High 70° F, Low 50° F; Winds: SW @ 8 mph. Precipitation: None.

Cargo Salvage: Not applicable to this scenario.

Initial Action Description:

1. Notification: Facility personnel notify the NRC and 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 (RP) has notified the required agencies in accordance with the facility response plan).

FOSC (EPA will notify the following):

- ADEC (also notified by the RP)***
- 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 impacted communities***
- Federally-recognized tribes in impacted communities***

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

2. 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/RP 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 RP
- 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.

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

- Dispatch pollution investigators (EPA Anchorage and ADEC 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 RP's plan for securing the source.
- Evaluate the capability of the RP to carry out an appropriate response given the situation.
- Prepare Initial POLREP (EPA).
- Prepare Initial SITREP (State).
- Instruct RP to determine his/her ability to mechanically recover spilled product on land prior to reaching Burbot Creek or Yukon River, and in the waters of Burbot Creek and the Yukon River.

4. Initial Response Actions:
   - Secure the Source. The Alyeska response team and additional local/regional resources are activated.
   - The Federal/State *Unified Plan* and Bristol Bay Subarea Contingency Plan are also implemented.
   - Using *Unified Plan, Annex B* Implement the Incident Command Systems (ICS) principles listed below. An EPA FOSC and an ADEC SOSC contact the facility Incident Commander and establish a Unified Command (UC). By 5:00 PM that night a UC and incident management team composed of industry, federal, state and local government personnel arrive at Alyeska's headquarters in Fairbanks, AK.
     - Evaluate RP'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 Fairbanks, AK.
     - Establish an appropriate Forward Operating Base at Yukon River Response Base (former Pump Station 6.)
     - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
   - The 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 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 UC.
   - Complete notification procedures. Include up-channel notification to include the ARRT, 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 impacted 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:
    - 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?
- Considerations for future actions:
    - Determine any fisheries impacts, including subsistence fisheries, and take appropriate action.

5. Spill Response Organization: A spill of this magnitude may be declared a Spill of National Significance (SONS). If the UC 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 UC 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 UC.

6. 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 the Alyeska C-Plan, response tactics to contain and clean-up the spill are implemented. Primary objectives are:
    - Site security.
    - Keep oil on land and out of Burbot Creek.
    - Prevent oil from reaching the Yukon River.
    - Implement recovery operations.
    - Protect sensitive resources and wildlife
    - Preserve the crime scene (No work on pipeline until FBI completes initial investigation).
    - 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 Yukon 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.

7. Response Requirements:
   a. Equipment: The equipment required for the RP's spill response includes: heavy equipment for building dams, culverts, and berms for containment; vac trucks, sandbags, boom, pumps, skimmers, and some form of oil storage. The APSC Mobile Command Post will be deployed. The EPA Command Trailer and ADEC Command Trailer may likewise be deployed to provide on-scene command, control, and communications.
   b. Personnel: Initial RP 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.

8. Resource Availability and Resource Procurement: The RP provides all spill response related equipment with their contractors supplementing any shortage. Any FOSC or State expenses not directly covered by the RP 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.

9. Shortfalls:
   a. Equipment: No shortfall of cleanup equipment anticipated. Limited housing and personnel support for response workers is limited at the Yukon River Response Base (former Pump Station 06). A Portable work-camp will be necessary, 4-6 days required to transport and set-up portable accommodations.
   b. Personnel: Personnel shortfalls are not anticipated.
   c. Funding: Funds availability and access are not anticipated to be a problem.
   d. Minimum Response Times: RP 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.

10. Spill Cleanup Timetable:
   a. Mechanical Cleanup Only: Mechanical cleanup time will depend on the duration of the discharge as well as the velocity of the creeks affected.
   b. Mechanical in Conjunction with Non-Mechanical: Not applicable

11. Disposal Options: Debris disposal is the responsibility of the RP. 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.

12. Cleanup Termination: Termination of cleanup should be a joint decision by the UC 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. MAXIMUM MOST PROBABLE SCENARIO

Date: May 19

Size of Discharge: 100,000 gallons of diesel and jet fuel

Location: Near Dunbar in the Minto Flats.

Spill Information: Approximately 100,000 gallons of diesel and jet fuel were released to land and water.

Scenario: An Alaska Railroad train of 70 cars derails near Dunbar in the Minto Flats with 19 tank cars leaving the tracks and at least seven rupturing. Approximately 100,000 gallons of diesel and jet fuel spilled. The fuel entered nearby ponds

Sensitive Areas at Risk: Specific information on resources at risk can be extracted from the Sensitive Areas Section in consultation with the resource trustees. The spill is located in the Minto Flats State Game refuge. This area is composed of sensitive wetlands which drain to the Tanana River. From a general viewpoint, resources in the immediate area of the spill that are at risk include the Minto Flats wetlands, and the waterfowl and fish species that utilize these waters. The Minto Flats supports very high density duck nesting, producing, including one of the largest trumpeter swan breeding populations in North America. Minto Flats is also an important spring and fall waterfowl staging area, particularly for geese and swans. Sandhill cranes, loons, bald eagle and peregrine falcon also nest in these wetlands. Chinook, chum and coho salmon migrate through the flats. A number of other fish species are found in the lakes and streams of the wetlands. Moose, black bear and fur-bearing mammals (beaver, muskrat, river otter, lynx, wolverine, red fox and mink) are also abundant.

Cargo Salvage: ARRC response crew begins transferring fuel from the damaged tank cars to keep discharge at a minimum. Salvage of the remaining tank cars is successful.

Equipment: The equipment required in the ARRC spill response plan with the ADEC will need to be augmented with vacuum units, super suckers, and possibly other oil recovery equipment to insure timely recovery. It is possible that additional equipment can be brought in a timely manner from the North Slope oil spill response organizations to respond to this spill volume. Alaska Chadux Corporation (ARRC's contracted oil spill response organization) will likewise be deploying personnel and equipment.

The ARRC may establish a mobile command post at the scene. The EPA Command Trailer and ADEC Command Trailer may likewise be deployed to provide on-scene command, control, and communications.

Initial Action Description:

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 travel time and logistical difficulties will make this complicate the operation.

C. AVERAGE MOST PROBABLE SCENARIO

Event Description: A fuel truck departs Fairbanks traveling to Delta Junction. The driver loses control of the vehicle and overturns, spill approximately 1,000 gallons of gasoline is released and is migrating towards the Tanana River.

Location: Richardson Highway, approximately one mile south of Harding Lake

Time of Year: October

On-Scene Weather: Air temperature 30°F, freezing rains

Initial Actions Description: The accident is reported by passing motorists to the State Troopers who proceed to the site and notify ADEC of the spill. The trucking company's dispatcher in Anchorage, Alaska is notified by the State Troopers and in turn notifies company management. Company managers contact the operators of the Trans Alaska Pipeline, with whom they have a contract to haul fuel, and request assistance to contain the spill. The trucking company contacts a local spill response contractor in Anchorage to respond to the incident.

Within 2 hours of the accident, a crew from Pump Station #9 is on scene with company response equipment. Initial response crews block off several highway drainage culverts to contain spilled fuel in the ditches adjacent to the roadway. The remaining fuel in the damaged tanker is pumped off into another tanker truck that was sent to the scene by the RP.

Approximately 300 gallons of additional oil and water is recovered over the next 12 hours by the commercial cleanup contractor's vacuum truck and by personnel using sorbent materials.

An undetermined amount of oil, estimated to be less than 50 gallons, enters the Tanana River but on the following day, no visible traces of oil are observed in the river during an overflight of the area by company personnel.

Cleanup Strategies: After initial response actions are accomplished, residual soil contamination of approximately 0.25 acres still remains saturated with approximately 700 gallons of oil. Under the supervision of ADEC personnel, the cleanup contractor recovers an additional 400 gallons from recovery and interception trenches. The area is flushed several times with fresh water in an attempt to remove

free oil from surrounding gravels. A long-term remediation plan involving soil sampling, runoff collection and bioremediation is developed and approved by the FOSC/SOSC with input from adjacent landowners.

SCENARIOS: PART TWO – HAZMAT

Situation: At approximately 10:00 am on June 1, a tanker truck transporting hydrochloric acid (37% concentration) overturns on the Dalton Highway while en-route to Prudhoe Bay (Deadhorse). The MC 312 liquid cargo tank contains approximately 4,500 gallons of hydrochloric acid. The driver of the tanker truck swerved to avoid a head-on collision with another vehicle, driven by a tourist. The tires on the right side of the truck caught the soft shoulder of the road and the truck rolled over and came to rest on its right side in a shallow embankment. The driver escaped serious injury and notified his dispatch center in Fairbanks before evacuating the cab of the truck. The tourist stops to render assistance, other vehicles are flagged down, and traffic is restricted from passing through the area. The truck driver observed liquid leaking from the rear portion of the tanker. There is no evidence of fire at this time.

Location: The incident occurred near milepost 65 on the Dalton Highway, approximately 10 miles North Northwest of Pump Station 6 along the Trans Alaska Pipeline System (TAPS). The pipeline is located approximately one-half mile away from the accident site.

Release Information: Over a period of approximately 30 minutes, approximately 700 gallons of hydrochloric acid has been released into the shallow ditch next to the road. The volume released begins to slow after 30 minutes, as the leak appears to be from the upper half of the tank, near the manhole assembly and outlet shutoff valve.

Date of Incident: June 1

On-scene Weather: Winds: Westerly at 5 mph; Temperature: 45°F; Sunny and clear, with no rain forecasted

Cargo Salvage: The trucking company's representative will survey the situation and determine when it is safe to transfer the remaining liquid cargo from the overturned truck to another tanker truck or suitable tanker.

Sensitive Areas at Risk: See *Sensitive Areas Section* of this plan.

Phelps Creek is approximately 1.5 miles southeast of the accident site. The creek is known to contain arctic grayling at this time of year. The accident is also several miles north of a known subsistence use area which is used by the residents of Stevens Village to gather plants.

Initial Actions:

1. Notification: The truck driver contacts his dispatch center and informs them of the accident. A worker assigned to the maintenance crew at Pump Station 6 also noticed the accident and notified Alyeska Pipeline Service Company through their emergency communications system.

The truck company's dispatch center staff notifies the NRC and ADEC's Northern Alaska Response Team in Fairbanks. The NRC notifies EPA of the incident and the FOSC is notified through channels. The State Troopers are also notified of the accident.

Alyeska Pipeline Service Company emergency dispatch also notifies the NRC and the ADEC office in Fairbanks.

The SOSC notifies the Fairbanks North Star Borough's Emergency Manager of the incident and requests that the Fairbanks Hazardous Materials (Hazmat) Team be placed on alert for possible mobilization.

2. Response Activation: The driver consults with the dispatch center staff and they direct him to establish an isolation perimeter of at least one-half mile around the accident site (in accordance with the Emergency Response Guidebook, Guide 157). Traffic on either side of the highway is halted by passersby who have been put to work by the truck driver. TAPS Pump Station 6 personnel are also helping with traffic control pending the arrival of law enforcement officials.

The FOSC and SOSC confer via teleconference with the truck company and confirm the contents and quantity of the tanker vehicle, and receive an update on the situation.

The FOSC and SOSC also confer with the Fairbanks Hazmat Team and inform them of the situation and discuss possible options.

The primary objective is to ensure health and safety of all responders and the general public.

3. Initial Response Actions: Evacuate personnel from the immediate vicinity of the accident, using the Emergency Response Guidebook data for hydrochloric acid (Guide 157).

Complete the notification process.

Activate the response structure to the level deemed necessary. For an incident of this nature, a full-scale incident management team is not envisioned.

Ensure notification of resource trustees and land owners/managers using Emergency Notification Checklist. A preliminary review of the land management maps in the Interior Alaska Subarea Contingency Plan indicates that the land is categorized as State-selected, while the Federal land manager is the Bureau of Land Management.

Activation of an Emergency Operations Center is not deemed necessary. The truck company's dispatch center in Fairbanks will coordinate all activities related to the response (at the direction of the on-scene, RP Incident Commander).

Evaluate the RP's plan for securing the source.

Ensure preparation of a Site Safety Plan prior to any entry into the area.

4. Spill Response Organization: Establish a basic command structure as described in the *Unified Plan, Annex B*. Include FOSC representative, SOSC representative, and RP's Incident Commander. The response group agrees to convene on scene and manage the situation. The UC (FOSC, SOSC, and RP IC) agree to establish a general staging area at Five Mile Airstrip (in coordination with Alyeska Pipeline Service Company). The airstrip is located approximately three miles north of the incident.

5. Containment, Countermeasures, and Cleanup Strategies: Determine the location and extent of the leak and secure the source.

Remove as much of the tanker's remaining liquid cargo as possible by pumping it into another tanker truck. A serviceable, MC312 tanker is not immediately available to offload the remaining liquid. Alaska West Express (Fairbanks) does have an MC312 tanker, but it does not meet DOT regulations due to a bottom discharge configuration. A waiver from DOT will be required to use this tanker truck. Another option is to use a vacuum truck, but additional safety precautions must be taken. The receiving tank must be rubber-lined, and the tank must not contain any residual chemicals that could react with the hydrochloric acid solution.

After the State Trooper completes his/her on-scene investigation, the overturned truck will be carefully raised into an upright position and towed back onto the highway.

Determine whether neutralizing the acid-soil mixture will be an effective countermeasure. Neutralization of the spill in situ, if possible, should be the priority cleanup option rather than excavation and removal of soil. This would minimize vegetation/organic soil disruption and permafrost degradation in the immediate area. The minimization of permafrost degradation is particularly important if the fuel gas line is next to or underlies the spill area, as there have been problems in the past with erosion along the fuel gas line ditch.

Minimize any removal and excavation of contaminated soil.

6. Response Requirements:
   a. Equipment: Any action to contain, plug or prevent additional release will require the use of appropriate personal protective equipment (PPE).
   b. Personnel: Personnel responding to this incident (State Troopers, firefighters, and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

7. Resource Availability and Resource Procurement: The Alaska State Troopers will respond to this incident upon notification. Additional resources, outside of those provided by the first responders will be the responsibility of the RP. An incident of this size will require evacuation of the immediate area around the accident site, and an isolation perimeter of at least one-half mile is required.

8. Shortfalls:
   a. Equipment: Firefighting equipment and law enforcement vehicles will be needed as a precautionary measure in the event the tanker truck and product ignites, and to control traffic/limit access to the incident; the Fairbanks Hazmat team will most likely not be deployed unless the situation deteriorates further. The trucking company, serving as the RP, will be coordinating with Alaska West Express in Fairbanks, who maintains a trained Hazmat response team. The team will be dispatched to secure the source and initiate cleanup.
   b. Personnel: Due to the location of the accident and the localized hazard (i.e., liquid hydrochloric acid on the ground), additional emergency response personnel are not deemed necessary. Alyeska Pipeline Service Company, acting as a Good Samaritan, offers to provide assistance with the overall response under the direction of the RP or the SOSC/FOSC.
   c. Funding: Funding of response and clean-up actions will be the responsibility of the RP.
   d. Minimum Response Times: Response should be initiated immediately. Based on the location of the incident, the State Trooper, SOSC, and the RP's designated Incident Commander will arrive

at the scene via helicopter by early afternoon (a few hours after the incident.) The FOSC, deploying from Anchorage, is expected to arrive at the scene sometime in the evening.

9. Spill Cleanup Timetable: This response should last no more than several days. Cleanup of the immediate area will be required, and contaminated soil will need to be collected and transported. The RP indicates that he will transfer the remaining liquid to another tanker (or suitable container) and remove the vehicle from the culvert (using a heavy-duty tow truck). The cleanup crew will then attempt to neutralize the acid-saturated soil, and minimize excavation and removal of the remaining contaminated soil as necessary.

10. Disposal Options: Some waste material will be generated during this response; however, 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 U.S. in an EPA, ADEC and DOT-approved manner.

11. Cleanup Termination: The FOSC and SOSC will determine the appropriate time to terminate cleanup operations based on the RP's ability to return the accident site to an acceptable condition.

KODIAK
SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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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 ADEC Spills Database and the NOAA Scientific Support Coordinator 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 SSC's files.

B. HAZARD/RISK 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. The region's maritime climate is comparatively mild with regard to general Alaskan temperatures; however, the islands are often fog-shrouded and frequently struck by storms. The weather in the region is the result of the interaction between major weather systems that move northward across the Gulf of Alaska or eastward across the Bering Sea and the land topography.

Although there are no crude or heavy oil port facilities in the Kodiak Subarea, due to it's proximity to trade routes of vessels laden with such cargo, the Kodiak Subarea is certainly vulnerable to any major marine oil pollution incident from Unimak Pass to Cook Inlet to Prince William Sound. A portion of the Great Circle Route, a major international shipping route, is through Unimak Pass, which brings those vessels close enough to pose a potential threat if there were ever a marine casualty resulting in a substantial oil spill. There are an estimated 3,000-3,500 vessels, approximately 30-40 of them tank ships, that transit through Unimak Pass each year. Approximately 65 bulk chemical tank vessels over 400 gross tons transit the area annually. Chemical cargos include ammonia, urea, liquefied natural gas, herbicides and pesticides, and chlorine.

Foreign-flagged vessels transiting through this area may or may not have a federal tank or non-tank vessel response plans and Western Alaska geographic specific appendix, depending on whether they make US ports of call. See report "Vessel Traffic in the Aleutians Subarea" for additional information. The report can be accessed at: http://www.dec.state.ak.us/spar/perp/docs/060920vesselreport_s.pdf . The more common substantial marine oil pollution threat for the Kodiak Subarea however would likely be from one of the many commercial fishing vessels, freight/container ships or possibly even a cruise ship.

A joint ADEC-Coast Guard study is currently underway that will address in detail risks posed by vessels transiting the Aleutians Subarea, and may likely include some residual risk factors for surrounding or adjoining subareas including the Kodiak Subarea. The background and current status of this joint study can be found at the following website: http://www.dec.state.ak.us/spar/perp/ai_risk/ai_risk.htm

C. VULNERABILITY ANALYSIS

The natural habitats of the Kodiak Subarea support extensive fish and wildlife populations that are extremely important to the social, economic, and cultural welfare of local residents. Offshore areas support a highly productive marine ecosystem, rich with inter-tidal, benthic, and pelagic plant and animal life that, in turn, provides nourishment for extensive populations of marine and androgynous finfish, shellfish, seabirds, and marine mammals. Rocky shorelines and cliffs provide pupping/haul-out areas for seals and sea lions and nesting areas for seabirds.

Commercial fishing and fish processing are economic mainstays in the region. As an average, there are approximately 350 fishing vessels operating in the Kodiak Subarea region, with seasonal flux. Shelikof Strait and nearby Unimak Pass and False Pass also witness heavy traffic both for transport servicing villages to the north and from Cook inlet and Prince William Sound to the Aleutian chain and for foreign-vessel transport between North America and the Far East.

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.

SCENARIOS: PART ONE – COASTAL OIL

A. WORST CASE SCENARIO

Situation: In the early morning hours of March 10, a severe windstorm parts the anchor chain of M/V LOGSHIP, which is anchored in Kazakof Bay near the Silver Bay Logging Camp on Afognak Island. While attempting to get underway, the vessel is pushed onto the rocks. At 0300 Air Station Kodiak receives notification via VHF from the vessel's master. The master states that the hull has come into contact with the rocks, but the extent of damage is uncertain. The master feels that the vessel is not in danger of sinking and is not taking on water in any of the manned spaces.

Vessel particulars: 600ft foreign-flagged logging cargo ship
Status: 75% loaded with logs for Japan
Fuel Capacity: 180,000 gallons bunker fuel
Tank configuration: unknown
On-scene Wx: Winds - 45 mph with gusts to 70 mph, diminishing throughout the day. Skies - clear

Size of the Discharge: A logging ship with a total fuel capacity of 186,000 gallons of Intermediate Fuel Oil (IFO-bunker fuel) runs hard aground on the rocks, discharging an estimated 100,000 gallons of IFO (approximately two-thirds of total onboard).

Cargo Salvage: The vessel is not considered a total loss and plans are to initiate temporary repair of the damaged vessel in a safe haven, and then proceed to a major shipyard for permanent repairs.

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 immediate area of the spill that are at risk include sea lions, otters, waterfowl concentrations, and seabird colonies. Kazakof Bay is on Afognak Island and is approximately 45 miles NNW of the town of Kodiak. Any significant spill in this area would severely impact local and regional users of this location.

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.

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

* ADMVA, DHSEM

** 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 and tribal leaders of any impacted/threatened communities

*** City of Kodiak

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

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

Gather information from over-flights, 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 conference room as the initial Command Post while USCG/ADEC personnel are en-route to the field Command Center located in Kodiak.

3. Initial Response Actions

Secure the source, if possible.

Develop containment/booming plan for implementation as weather abates.

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

Evacuate any injured personnel or unnecessary crew members.

Evacuate crew for drug testing if possible.

Complete notifications and include other resources as required. 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.

Determine any fisheries impacts, and take appropriate action.

Prioritize areas for exclusion booming, protective booming, and shoreline cleanup. Review existing Geographic Response Strategies (GRS) developed for the Kodiak Subarea.

Review seafood processor protection plans and implement specific plans to protect the water intakes from any spilled oil.

Establish a Joint Information Center and activate a Unified Command website for the incident.

Prepare initial press release jointly with the Unified Command.

Keep local and tribal stakeholders informed.

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

Schedule routine over-flights of the impacted area. Request USCG 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.

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

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

Determine feasibility of removal actions based on:

X Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?

X Can cleanup be initiated before the pollutant disperses, making recovery impractical?

X Can equipment be deployed without excessive risk to the life and health of personnel?

4. 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 escalation of an incident to a SONS is intended to make available more resources and personnel for response.

A Liaison Officer will be assigned to act as a liaison with any landowners, leaseholders or 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.

5. 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 SSC to provide spill tracking and trajectory modeling to determine present location and path of spill.

6. 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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. (See Resources Section B)

b. Vessels, Skimmers, Boom, and other Spill Response Equipment: 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, as the Kodiak Subarea has minimal pre-staged response equipment. (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 are also listed in the Resources Section, as well. These companies have a variety of bladders and smaller barges for nearshore deployment, as well as offshore storage barges and portable tanks for shoreside temporary storage.

c. Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 and meeting HAZWOPER requirements are located in Kodiak, English Bay, Port Graham, Homer, Kenai, and Seldovia. The Seldovia SOS has a response structure to dispatch and support local vessel operations and maintains an immediate callout list of qualified vessels and personnel. An available armada of response vessels exists with potential to benefit a spill response if properly supported and effectively managed. Logistical arrangements and support will be necessary to maintain any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

d. Personnel: Initial personnel activation will require several hours to days to organize. The Kodiak Subarea, 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.

7. Resource Availability and Resource Procurement

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 the spill cooperatives 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 coops have highly organized management teams knowledgeable in the ICS structure and routinely exercise their roles as responders.

Procuring the resources identified in this spill response is the RP's responsibility. A spill of this magnitude would likely exceed $1 million each day during the initial stages of the response. 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.

8. 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 from 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 past decade. 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 issues):

(1) Housing – Local hotels, seafood processing facility man-camps, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the Kodiak area. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Kodiak is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported over water or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 incident area.

9. Spill Cleanup Timetable

The on-water spill response will continue until all recoverable oil is collected with weather forces a major factor in operations due to personnel safety. Shoreline cleanup will begin as soon as possible after beaches are oiled. The number of months/years required to terminate cleanup operations depends heavily upon the efficiency of the initial on-water response.

10. 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 recovered product and oil-contaminated equipment. The remoteness of the region will complicate disposal and elevate the costs of handling and transportation. The scarce availability of shipping and storage facilities makes it difficult to comply with the timeframes 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation and disposal of accumulated waste. Also, areas designated for cleaning contaminated equipment must be able to handle the contaminated runoff.

11. Cleanup Termination

Termination of cleanup should be a joint decision by the UC 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

The maximum most probable case is determined by the largest recorded oil spill to date in Western Alaska, which was the M/V Selendang Ayu on December 8, 2004. During this event, a total of 321,052 gallons of IFO 380 bunker fuel and 14,680 gallons of diesel were released. Due to the large size of this spill, the response actions for the maximum most probable and the worst case scenarios will not differ significantly.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case for the Kodiak Subarea would likely be a fishing vessel that either sinks, goes aground, or otherwise creates a pollution event through the release of non-crude oil (most likely diesel). Many of the response actions outlined in the worst case scenario would remain the same, although the need for out-of-region response equipment, activation of a Unified Command, Joint Information Center, and deployment of federal and state resources would not be at the same scale. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

SCENARIOS: PART TWO – HAZMAT

1. Situation: The incident occurs on July 30 at 10pm at a seafood processing plant in the city of Kodiak. In a normally unmanned cold storage area, a high pressure (120-150psi) liquid pipe flange failed, and began releasing anhydrous ammonia at the rate of approximately 95lbs/min. It is estimated that by the time it was detected and ultimately secured, the release was ongoing for approximately 40 minutes.

The facility employee making the security round first attempted to isolate the leaking pipe, but was unfamiliar with the proper isolation valves and was overcome by the ammonia and left the area because of discomfort. A night manager was called and promptly arrived and successfully stopped the discharge by securing the proper cut-off valves.

When the anhydrous ammonia release occurred, a fixed ammonia air monitor with an audible alarm failed to activate and therefore did not warn anyone the liquid ammonia release was ongoing. Upon securing the discharge, the manager went to the fish processing area to report the leak and clear the area after they sounded the evacuation alarm. During the evacuation of the facility, several people were overcome by the ammonia.

The anhydrous ammonia release occurs at a rate of 95lbs/min over a period of approximately 40 minutes, for a total of 3800 lbs.

2. Location: The incident occurred at a seafood processing facility in Kodiak.

3. Release Information: Over a period of 40 minutes, approximately 3,800 pounds of anhydrous ammonia was released into the atmosphere.

Date of Incident:	July 30
On-scene Weather:	Winds: Northerly at 10 mph, gusts to 15mph (towards town) Temperature: 63°F Relative Humidity: 89% Drizzling rain

4. **Sensitive Areas at Risk:** Waterfowl concentrations; seals; sea lions; seafood processing employees; small boat harbor; Kodiak local residents, and seasonal cruise ship tourists.

5. **Initial Actions:**

- Initial call taken by the Kodiak Fire Department, and up-channel reporting in initiated.
- Determine and confirm personnel safety hazards in the immediate area and downwind of the ammonia release.
- Ensure public health and safety by either evacuating populace at risk or directing them to shelter in place.
- Immediate notification of ADEC via the Spill Report Hotline. Captain of the Port, Western Alaska, also receives notification simultaneously from the Marine Safety Detachment in Kodiak, followed by notification from the National Response Center. Follow-on

federal/state/local agency notifications are made based on the Emergency Notification List in the Response Section.

- DEC notifies the Statewide Hazmat Response Team of the situation and the need for possible deployment.
- DEC also notifies Aware Consulting, and activates a term contract with them for technical advice on dealing with the ammonia release and post-incident investigation.
- Activate response structure including local responders and the Statewide Hazmat Response Team.
- Contact FAA to restrict airspace.
- Prepare initial press release.
- Due to the threat to public health and safety, the initial local Incident Commander or a representative from the City of Kodiak will continue to serve as a member of the Unified Command until the threat is abated.
- Commence mobilization of response personnel.
- Incident Command System activated, and Unified Command formed.
- COTP directs the MSD to establish a Safety Zone around the facility.
- USCG drafts POLREP One. ADEC drafts and releases initial SITREP.
- USCG issues Letter of Federal Interest. ADEC issues Notice of State Interest in a Pollution Incident.
- Issue Letter of Designation.
- State of Alaska alerts additional response action contractors for possible activation, and also alerts other members of the Statewide Hazmat Response Team for additional support, if required.
- Determine if the Hazmat response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC Historic Properties Specialist.

6. Initial On-Scene Investigation/Inspection Evaluation and Recommendations:

- Develop information from facility worker reports, release size, utilize video recording as much as possible to document scene and develop initial response strategy.
- Determine overall system capacities for anhydrous ammonia, and determine potential for additional releases, in consultation with the facility manager and refrigeration specialist.
- Collect charts and refrigeration system maintenance and re-supply files for evidence.

7. Containment Countermeasures and Cleanup Strategies:

The Unified Command will coordinate and develop an Incident Action Plan to:

- Conduct initial containment,
- Establish the initial on scene command post and staging area.

- Support local responders, and provide updated information to Federal, State, local, and tribal entities.

8. Resource Requirements:

- Due to the short nature of the release, the Statewide Hazmat Response Team will likely be stood down after determination that the ammonia release has stopped. The team will remain on standby pending any further releases that may be prolonged in nature. The Aware Consulting staff person will be mobilized to Kodiak along with several DEC responders to provide additional support to the local responders.

9. Response Requirements:

a. **Equipment:** Any action to contain, plug or prevent additional release will require the use of appropriate personal protective equipment (PPE).

b. **Personnel:** Personnel responding to this incident (local firefighters, and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

10. Shortfalls:

a. **Equipment:** The City of Kodiak does not maintain a Level 'A' entry capable Hazmat Team. There is a Level 'A' Hazmat capability at USCG Air Station Kodiak that may be available within a reasonable period of time. There are limited pieces of equipment maintained by the seafood processing facility.

b. **Personnel:** Due to the location of the accident and the localized hazard (i.e., anhydrous ammonia release over an hour's period), additional emergency response personnel are not deemed necessary, unless the release recurs over a prolonged period of time.

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. Based on the location of the incident, the RP, local fire chief, and Coast Guard will initially respond to the situation. The FOSC, SOSC, and Aware Consulting representative (all deploying from Anchorage) is expected to arrive at the scene by early afternoon.

12. Spill Cleanup Timetable: This response should last no more than a couple of days. Cleanup of the immediate area will be required, and may simply consist of facility ventilation. The RP indicates that he/she will direct a complete inventory of the ammonia refrigeration system, and determine the potential for any potential releases. DEC directs the Aware Consulting ammonia specialist to assist with the inventory and conduct a thorough inspection of the system to determine the cause of the release and potential for future ammonia releases.

14. Cleanup Termination: The FOSC and SOSC will determine the appropriate time to terminate operations based on the RP's ability and assurances that further releases will not occur. The investigation into the cause of the release will continue after response termination.

NORTH SLOPE
SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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SCENARIOS: PART ONE – COASTAL OIL

A. WORST CASE SCENARIO

Size of the Discharge: 2,160,200 bbls 25-30 API Crude Oil.

Event Description: An exploratory well experiences a blowout from the blowout preventer on the sea floor and begins releasing 61,000 barrels of oil per day (BOPD) declining to 20,479 BOPD by day 74. Winter is fast approaching. The ice edge has already passed the platform and is continuing to advance rapidly. Ice coverage exceeds 60% at the time of the spill. Estimates indicate ice coverage will exceed 75% in 30 days and approach 100% within 60 days of the initial spill date.

Location: Approximately 60 miles offshore of the North Slope District –
Lat/Long: 71º 18' 17.2 N 163º 45' 9 W

Spill: The blowout is releasing crude oil at the rate of 61,000 barrels of oil per day (BOPD) declining to 20,479 BOPD by day 74. Rough trajectory is based on circulation patterns, oil type and quantity, and weather. Trajectory assumes flow through low ice concentrations and should only be used for the purposes of this scenario. (Note: Trajectory information taken out of context with this scenario should not be relied upon as a forecast for actual conditions or spill events). Currents, weather and product spilled will combine to limit the spread of the slick and also keep it from traveling a great distance over this time period.

Cargo Salvage: Not Applicable.

Date: August 1

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 immediate area of the spill that are at risk include walrus, shellfish, plankton, lower trophic organisms, polar bears, seals, migratory whales, subsistence fish, waterfowl concentrations, seabird colonies and historic properties.

The shoreline geomorphology in the immediate vicinity of the spill is predominantly sand/rocky shoreline. 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. Several downstream communities 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 ensure the following are notified:

   ** ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
   * ADNR
   * BSEEE
   * ADF&G
   * ADMVA, DHSEM
   ** CGD17 OPCEN, to activate support resources including:
      DRG, District Response Group
      DRAT, District Response Advisory Team
      PIAT, Public Information Assist Team
      RRT, Regional Response Team
   ** NRC, National Response Center
   *** DOI
   *** DOC
   *** NOAA SSC, Scientific Support Coordinator
   ** NSFCC, National Strike Force Coordinating Center
   ** NPFC, National Pollution Fund Center
   *** North Slope Borough
   *** North West Arctic Borough
   *** Local Emergency Managers of directly impacted communities
   *** Federally-recognized tribes in impacted communities

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

2. Response Activation

   - Dispatch representatives to the scene at the first opportunity
   - FOSC/SOSC/RP Representatives establish direct communications
   - Ensure health and safety of platform crew
   - Ensure stability of platform
   - Attempt to make initial determination of cause of blowout
   - Ensure contact with BOEMRE 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, 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
   - 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.

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

- Ensure notification of resource trustees using the Emergency Notification Checklist
- Evaluate the capability of the RP to carry out an appropriate response given the situation
- 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 actions are not already underway
- Instruct RP to determine his/her ability to mechanically recover spilled product before 100% ice cover
- Evaluate capability to contain and recover oil after 100% ice cover using innovative techniques appropriate to arctic conditions
- Evaluate RP's plan for securing the source

4. Initial Response Actions

- Secure the source, if possible.
- Stabilize the platform if required
- Activate the response structure to the Spill of National Significance (SONS) level
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas. Utilize established Geographic Response Strategies (GRS), when possible.
- Evacuate any injured personnel or unnecessary crew members.
- Using **Unified Plan, Annex B** Implement some or all of the Incident Command Systems (ICS) principles listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available).
    - Evaluate RP'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- Plan for Prudhoe Bay.
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
- Establish local (Anchorage) command post while individuals are en route to the field command post and plan for relocation to Prudhoe Bay.
- Prepare initial press release with the Unified Command.
- Complete notification procedures. Include up-channel notification to include the RRT, DRG, DRAT, PIAT, SILC contracting team, NPFC, and NSFCC.
- 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.
- Determine any fisheries impacts, and take appropriate action.
- Consider alternatives to mechanical response: dispersant application, *in situ* burning

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

A spill of this magnitude would normally 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice to the Unified Command.

6. Containment Countermeasures and Cleanup Strategies

- Evaluate/determine whether a relief well is appropriate.
- Evaluate/determine feasibility of in-situ burn.
- Boom the rig at the earliest opportunity, pending favorable weather.
- Evaluate/determine feasibility of dispersants.
- Organize Shoreline Cleanup Assessment Teams in preparation for shoreline surveys.
- Ensure an appropriate wildlife deterrent, capture and treatment program is in place.
- If not already provided, request that natural resource trustees provide a Natural Resource Damage Assessment Liaison to work with the Unified Command.
- 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.
- Consider use of BOEM/UAF HR Radar.

- Continue consulting with natural resource trustees and Historic Properties Specialist on proposed response strategies to help prevent or minimize injury to natural resources and historic properties.
- Continue Endangered Species Act consultation with FWS and NMFS.
- Response procedures for on-ice/under-ice recovery are located: at http://www.alaskacleanseas.org/tech-manual/ , and http://www.alaska.boemre.gov/ref/ProjectHistory/tactics_manual.pdf

7. Resource Requirements

b. Equipment: Operators on the OCS are required to have oil spill response assets immediately available to respond to spills from their facilities. 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. A partial list of available equipment for the North Slope subarea is located in section B of this plan. The Alaska Clean Seas equipment readily available within the North Slope Subarea is located in the ACS Technical Manual, Vol. 1 Tactics Descriptions, available at http://www.alaskacleanseas.org/. A list of the equipment available by Shell is located: http://www.alaska.boemre.gov/ref/ProjectHistory/tactics_manual.pdf.

b. Vessels, Skimmers, Boom, and other Spill Response Equipment:

(1) 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. (Master Service 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). Resources available include, but are not limited to the following:

Skimmers

- Lamor 30
- Lamor 12
- Manta Ray
- Skimpak 1800
- Desmi Minimax
- Stellar vac unit
- Rovac

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 also in local inventories.

Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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. A ready fleet of response vessels experienced in pollution operations meeting HAZWOPER requirements are located in 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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

Personnel: Initial personnel activation will require several hours to days. The North Slope subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities. However, if the Responsible Party is a member of ACS, there are approximately 300 HAZWOPER-trained personnel available to respond to a spill.

8. Resource Availability and Resource Procurement

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 the spill cooperatives 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. Lower 48 OSRO's 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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 issues):

(1) Housing – Local hotels, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the subarea. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Prudhoe Bay is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported overwater or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 would have response personnel and equipment on scene within 24-hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the sea state and weather in the incident area.

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 November, 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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal and of accumulated waste. 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 SCENARIO

1. Situation: The fuel barge planning to refuel the Barter Island Long Range Radar Site (LRRS) strikes a partially submerged object en route to the anchoring location. The object is suspected to be ice. The vessel continues to the anchoring location having no direct indication of damage since no product is seen escaping. Apparently, as long as the vessel is underway, fuel does not escape from the damaged tanks. But after the vessel anchors up, awaiting fuel transfer, free product is detected on the water.

2. Location: Barter Island has numerous above ground storage tanks that have a combined capacity of over 40,000 bbls of fuel, mostly arctic diesel and JP-4. Fuel barges re-supply the site only once a year. Site of the discharge is approximately 70° 10' N 143° 35' W.

3. Spill Information: Approximately 500 bbls of arctic diesel are released over a one hour period.

Date: August 1
On-Scene Weather: Winds E @ 10 kts
Temperature 10° C (50° F)
Sea State Calm
No surface ice present

4. Cargo Salvage: Crew begins transferring fuel as necessary to maintain stability and attempt to hydrostatically load the damaged tanks. Salvage of the remaining cargo is successful.

5. Sensitive Areas at Risk: There may be nearshore bowhead whale feeding and later migration from the east in September. A variety of migratory waterfowl (including geese, ducks, and eiders) nest and feed in the area and will stage fall migrations here. This area is designated as critical habitat for polar bears, who often feed on whale carcasses on Barter Island. Inundated low-lying tundra and peat shorelines could possibly be impacted by a spill. This is a subsistence use area.

6. Initial Actions:

a. **Notification:** (Assume the Responsible Party (RP) has notified the required agencies in accordance with the vessel response plan)

FOSC (USCG will notify the following):
*** ADEC (also notified by the RP)
*** DOI
* ADNR
* ADF&G
* ADMVA/DHSEM
*** CGD17 OPCEN, which includes
District
DRG
DRAT
PIAT
*** ARRT

*** = Notification by FOSC
** = Message notification
* = Notification by State

*** NRC
*** NOAA Scientific Support Coordinator
** NSF
** NPFC
*** North Slope Borough
*** Local Emergency Managers of directly impacted communities

b. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene. Begin recall of local in-house personnel (USCG, ADEC, ADNR, etc.) as needed to support 24-hour operations for a spill of this magnitude.

c. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:** Dispatch pollution investigators (MSO 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. All information must 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.

d. **Initial Response Actions:**
- Dispatch rep from SECTOR Anchorage and DEC NART (Fairbanks) as needed
- Stabilize the vessel
- Secure the source of discharge through fuel transfer
- Ensure health and safety of personnel
- Complete notification procedures
- Activate the response structure to the level deemed necessary
- 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.
- Prepare Initial POLREP (USCG)
- Prepare Initial SITREP (State)
- Establish Anchorage-based command post for FOSC/SOSC and Staff
- FOSC/SOSC will operate from offices and will not travel to the scene
- Consult with DOI, DOC and State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Activate FOSC's Historic Properties Specialist.
- 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 cleanup impractical?

3) Can equipment be deployed without excessive risk to the life and health of personnel?

7. **Spill Response Organization:** Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, RP's Incident Commander, and local community liaison. 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.

8. **Containment, Countermeasures and Cleanup Strategies**: Immediate containment is required to mount an effective recovery operation. Vessel crew deploys response equipment carried aboard as required by the Vessel Response Plan. Containment boom is deployed and approximately 40% of the released product is contained and skimming begun.

Natural dispersion and evaporation will act to remove the product from the water surface. A spill of this volume will spread, disperse, and evaporate making recovery, if not initially contained, very difficult.

In situ burning and dispersant strategies will not be employed.

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 may make "chasing" this oil spill infeasible.

9. **Response Requirements:**

a. **Equipment:** The equipment required in the State and Coast Guard vessel response plans should adequately address this spill. It is unlikely that additional equipment can be brought to bear in a timely manner and at a reasonable cost to respond to this spill volume. Natural processes will drastically reduce the spill volume in a matter of hours rather than days.

b. **Personnel:** Expect to use only on board personnel for this response. The crew should be capable of deploying equipment and recovering product without assistance. Trustees and other agencies should not require augmentation or additional manpower to deal with this spill.

10. **Resource Availability and Resource Procurement:** Resources should be on hand to deal with this spill. The volume of product that can be expected to be recovered will be relatively small and additional resources will probably be unnecessary by the time they arrive on scene.

11. **Shortfalls**

a. **Equipment:** None anticipated.

b. **Personnel:** None anticipated.

c. **Funding:** No funding problems anticipated.

d. **Minimum Response Times:** Vessel owner should comply with the approved vessel response plan. If these response times are met, response should be adequate assuming the crew acts quickly to contain the product being released as soon as it's detected.

12. Spill Cleanup Timetable:

a. **Mechanical Cleanup Only:** Two days.

b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

13. Disposal Options: Debris disposal is the responsibility of the RP. A small volume of oil contaminated debris will likely be produced. The RP must dispose of contaminated debris according to existing laws. The RP will typically be knowledgeable in the methods and requirements for disposing of small quantities of oiled debris.

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

d. 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

e. Further removal operations would cause more environmental harm than the oil to be removed; or

f. Cleanup measures would be excessively costly in view of their insignificant contribution to minimizing a threat to the public health and welfare; and

g. Activities required to repair unavoidable damage resulting from removal actions have been performed.

C. AVERAGE MOST PROBABLE SCENARIO

1. Situation: A lightering vessel is transferring fuel to the Wainwright bulk fuel storage facility when the 4 inch transfer hose ruptures near the marine header.

2. Location: The coastal village of Wainwright is located at a position of 70 ° 37' North latitude, 160 ° 04' West longitude, approximately 80 miles southwest of Barrow.

3. Spill Information: Approximately 50 gallons of No. 1 diesel fuel is discharged into the Chukchi Sea.

Date: August 15
On-Scene Weather: Winds: W @ 10 kts
Temperature: 10° C (50° F)
Sea State: Calm

4. Cargo Salvage: Upon discovery of the rupture, the transfer pump is secured and the valves at the marine header and aboard the lightering vessel are closed, preventing the loss of additional cargo.

5. Sensitive Areas at Risk: The shoreline from Wainwright to the southwest is critical habitat for polar bears. There is a sizeable Pacific walrus haulout near the village. Three species of ice seals may be in the area. There may also be concentrations of beluga whales in the nearshore environment and feeding gray whales with calves offshore. A variety of migratory waterfowl (including geese, ducks, and eiders) and shorebirds nest and feed in the area and will stage fall migrations here. Inundated low-lying tundra and sand beaches may be impacted by an oil spill. This is a subsistence use area.

6. Initial Actions:

a. **Notification:** (Assume the Responsible Party (RP) has notified the required agencies in accordance with the facility response plan)

FOSC (USCG will notify the following):
*** ADEC (also notified by the RP)
* ADNR
* ADF&G
* ADMVA/DHSEM
*** CGD17 COMMCEN
*** NOAA Scientific Support Coordinator
** NPFC
*** North Slope Borough (also notified by RP)
*** DOI

*** = Notification by FOSC
** = Message notification
* = Notification by State

b. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene. Begin recall of local in-house personnel (USCG, ADEC, ADNR, etc.) as needed to support a spill of this magnitude.

c. Initial Response Actions On-Scene:

- Alert vessel tankerman to secure pumping
- Secure electrical power and sources of ignition
- Close valves to prevent the flow of fuel through the ruptured hose
- Maintain a safety zone due to health hazards; evacuate personnel as necessary
- Ensure proper PPE is available and used by responders
- Alert the North Slope Borough to activate the initial ICS
- Contain and recover the charged product
- Properly dispose of recovered oil and oily waste
- Properly decontaminate all oiled response equipment

d. Initial Agency Evaluation and Recommendations:

- FOSC/SOSC/RP establish direct communications
- Evaluate the RP's response capabilities
- As required, dispatch representatives to the scene at the earliest opportunity
- Ensure health and safety of all individuals
- Coordinate with local emergency response personnel to establish a Safety Zone, as necessary
- Consult with DOI, DOC and the State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Consider activation of FOSC's Historic Properties Specialist.
- Determine feasibility of removal actions based on the following considerations:

    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 cleanup impractical?

    3) Can equipment be deployed without excessive risk to the life and health of personnel?

- Ensure development of a Site Safety Plan
- Prepare initial POLREP (USCG)
- Prepare initial SITREP (State)

7. Spill Response Organization: Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, RP's Incident Commander, and local community liaison. 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.

8. Containment, Countermeasures and Cleanup Strategies: Due to the small amount of discharged product, nature of diesel fuel, and weather conditions, the product will likely

weather quickly through evaporation and emulsification. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product through the hose and contain the spill.

9. Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Facility personnel and other emergency response personnel will likely be the most crucial individuals in this scenario.

10. Resource Availability and Resource Procurement. The RP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the RP to respond to this event. In the event the RP does not have adequate equipment, the North Slope Borough maintains some response equipment that may be available, through appropriate agreements, for this scenario. Out-of-region resources are not considered necessary for this response.

11. Shortfalls

a. **Equipment:** No shortfall of cleanup equipment is anticipated.

b. **Personnel:** No shortfalls in personnel are anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.

d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

12. Spill Cleanup Timetable:

a. **Mechanical Cleanup Only:** One day.

b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

13. Disposal Options: Debris disposal is the responsibility of the RP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The RP will typically be well versed in these procedures due to the nature of their fuel handling operations.

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

d. 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

e. Further removal operations would cause more environmental harm than the oil to be removed; or

f. Cleanup measures would be excessively costly in view of their insignificant contribution to minimizing a threat to the public health and welfare; and

g. Activities required to repair unavoidable damage resulting from removal actions have been performed.

SCENARIOS: PART TWO – HAZMAT

1. **Situation:** At approximately 10:00 am on June 1, a tanker truck transporting hydrochloric acid (37% concentration) overturns on the Dalton Highway while en-route to Prudhoe Bay (Deadhorse). The MC 312 liquid cargo tank contains approximately 4,500 gallons of hydrochloric acid. The driver of the tanker truck swerved to avoid a head-on collision with another vehicle, driven by a tourist. The tires on the right side of the truck caught the soft shoulder of the road and the truck rolled over and came to rest on its right side in a shallow embankment. The driver escaped serious injury and notified his dispatch center in Fairbanks before evacuating the cab of the truck. The tourist stops to render assistance, other vehicles are flagged down, and traffic is restricted from passing through the area. The truck driver observed liquid leaking from the rear portion of the tanker. There is no evidence of fire at this time.

2. **Location:** The incident occurred near milepost 280 on the Dalton Highway, approximately 10 miles due North of Pump Station 4 along the TransAlaska Pipeline System (TAPS). The pipeline is located approximately ¼ mile away from the accident site.

3. **Release Information:** Over a period of approximately 30 minutes, approximately 700 gallons of hydrochloric acid has been released into the shallow ditch next to the road. The volume released begins to slow after 30 minutes, as the leak appears to be from the upper half of the tank, near the manhole assembly and outlet shutoff valve.

Date of Incident: June 1

On-scene Weather: Winds: Westerly at 5 mph
Temperature: 45°F
Sunny and clear, with no rain forecasted

4. **Cargo Salvage:** The trucking company's representative will survey the situation and determine when it is safe to transfer the remaining liquid cargo from the overturned truck to another tanker truck or suitable tanker.

5. **Sensitive Areas at Risk:** Several creeks (Terry Creek, Mack Creek, and Ed Creek) are approximately one mile away from the accident site. All three creeks are known to contain arctic grayling, and possibly arctic char. The accident is also in a known subsistence use area, and two wildlife migratory routes are known to exist approximately two miles to the west and approximately five miles to the east of the accident location. Primary sources for determining resources at risk include the federal and state resource agencies and the TAPS Environmental Atlas, the North Slope Subarea Contingency Plan.

6. **Initial Actions:**

a. **Notification:**

The truck driver contacts his dispatch center and informs them of the accident. A worker assigned to Pump Station 4 also noticed the accident and notified Alyeska Pipeline Service Company through their emergency communications system.

The truck company's dispatch center staff notifies the National Response Center (NRC) and the ADEC's Northern Alaska Response Team in Fairbanks. The NRC notifies EPA of the incident and the FOSC is notified through normal communication channels. The Alaska State Troopers are also notified of the accident.

Alyeska Pipeline Service Company emergency dispatch also notifies the National Response Center and the ADEC office in Fairbanks.

The ADEC State On-Scene Coordinator (SOSC) notifies the Fairbanks North Star Borough (FNSB) Emergency Manager of the incident and requests that the FNSB Hazardous Materials (Hazmat) Team be placed on alert for possible mobilization.

b. **Response Activation:**

The driver consults with the dispatch center staff and they direct him to establish an isolation perimeter of at least one-half mile around the accident site (in accordance with the Emergency Response Guidebook, Guide 157). Traffic on either side of the highway is halted by passersby who have been put to work by the truck driver. Alyeska Pump Station 4 Security personnel are also helping with traffic control pending the arrival of law enforcement officials.

The FOSC and SOSC confer via teleconference with the truck company and confirm the contents and quantity of the tanker vehicle, and receive an update on the situation.

The FOSC and SOSC also confer with the FNSB Hazmat Team and inform them of the situation and discuss possible options.

The primary objective is to ensure health and safety of all responders and the general public.

c. **Initial Response Actions:**

Evacuate personnel from the immediate vicinity of the accident, using the Emergency Response Guidebook data for hydrochloric acid (Guide 157).

Complete the notification process.

Activate the response structure to the level deemed necessary. For an incident of this nature, a full-scale incident management team is not envisioned.

Ensure notification of resource trustees and land owners/managers using Emergency Notification Checklist. A preliminary review of the land management maps in the North Slope Subarea Contingency Plan indicates that the land is categorized as State-selected, while the Federal land manager is the Bureau of Land Management.

Activation of an Emergency Operations Center is not deemed necessary. The truck company's dispatch center in Fairbanks will coordinate all activities related to the response (at the direction of the on-scene, RP Incident Commander).

The spill occurs in the ditch very close to or over the APSC fuel gas line running to Pump Station 4. Responders should also determine any potential impacts to the gas line and initiate actions to protect the line, if necessary.

Evaluate the Responsible Party's plan for securing the source.

Ensure preparation of a Site Safety Plan prior to any entry into the area.

7. Spill Response Organization: Establish a basic command structure as described in the Unified Plan, Annex B. Include FOSC representative, SOSC representative, and RP's Incident Commander. The response group agrees to convene on scene and manage the situation. The Unified Command (FOSC, SOSC, and RP IC) agree to establish a general staging area at Galbraith Airport (in coordination with Alyeska Pipeline Service Company).

8. Containment, Countermeasures, and Cleanup Strategies:

Determine the location and extent of the leak and secure the source.

Remove as much of the tanker's remaining liquid cargo as possible by pumping it into another tanker truck. A serviceable, MC312 tanker is not immediately available to offload the remaining liquid. Alaska West Express (Fairbanks) does have an MC312 tanker, but it does not meet DOT regulations due to a bottom discharge configuration. A waiver from DOT will be required to use this tanker truck. Another option is to use a vacuum truck, but additional safety precautions must be taken. The receiving tank must be rubber-lined, and the tank must not contain any residual chemicals that could react with the hydrochloric acid solution.

After the State Trooper completes his/her on-scene investigation, the overturned truck will be carefully raised into an upright position and towed back onto the highway.

Determine whether neutralizing the acid-soil mixture will be an effective countermeasure. Neutralization of the spill in situ, if possible, should be the priority cleanup option rather than excavation and removal of soil. This would minimize vegetation/organic soil disruption and permafrost degradation in the immediate area. The minimization of permafrost degradation is particularly important if the fuel gas line is next to or underlies the spill area, as there have been problems in the past with erosion along the fuel gas line ditch.

Minimize any removal and excavation of contaminated soil.

9. Response Requirements:

b. **Equipment:** Any action to contain, plug or prevent additional release will require the use of appropriate personal protective equipment (PPE).

b. **Personnel:** Personnel responding to this incident (State Troopers, firefighters, and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

10. **Resource Availability and Resource Procurement:** The Alaska State Troopers will respond to this incident upon notification. Additional resources, outside of those provided by the first responders will be the responsibility of the Responsible Party. An incident of this size will require evacuation of the immediate area around the accident site, and an isolation perimeter of at least one-half mile is required.

11. **Shortfalls:**

a. **Equipment:** Firefighting equipment and law enforcement vehicles will be needed as a precautionary measure in the event the tanker truck and product ignites, and to control traffic/limit access to the incident; the Fairbanks Hazmat team will most likely not be deployed unless the situation deteriorates further. The trucking company, serving as the Responsible Party, will be coordinating with Alaska West Express in Fairbanks, who maintains a trained Hazmat response team. The team will be dispatched to secure the source and initiate cleanup.

b. **Personnel:** Due to the location of the accident and the localized hazard (i.e., liquid hydrochloric acid on the ground), additional emergency response personnel are not deemed necessary. Alyeska Pipeline Service Company, acting as a Good Samaritan, offers to provide assistance with the overall response under the direction of the Responsible Party or the SOSC/FOSC.

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. Based on the location of the incident, the State Trooper, SOSC, and the RP's designated Incident Commander will arrive at the scene via helicopter by early afternoon (a few hours after the incident.) The FOSC, deploying from Anchorage, is expected to arrive at the scene sometime in the evening.

12. **Spill Cleanup Timetable:** This response should last no more than several days. Cleanup of the immediate area will be required, and contaminated soil will need to be collected and transported. The RP indicates that he will transfer the remaining liquid to another tanker (or suitable container) and remove the vehicle from the culvert (using a heavy-duty tow truck). The cleanup crew will then attempt to neutralize the acid-saturated soil, and minimize excavation and removal of the remaining contaminated soil as necessary.

13. **Disposal Options:** Some waste material will be generated during this response; however, 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.

14. **Cleanup Termination:** The FOSC and SOSC will determine the appropriate time to terminate cleanup operations based on the RP's ability to return the accident site to an acceptable condition.

SCENARIOS: PART THREE – INLAND OIL

A. WORST CASE SCENARIO

Size of the Discharge: 40,000 bbls 25-30 API Crude Oil

Event Description: Corrosion in the Trans Alaska Pipeline has resulted in a pipeline rupture. The release is presumed to have started as a small leak which rapidly degraded to a pipeline rupture. An unknown, (to be determined) malfunction delayed the detection and shutdown of the pipeline for approximately 2-2.5 hours. The total amount released is estimated at 40,000 bbls

Location: At PLMP54, south of location where pipeline comes above ground. Lat/Long: 69º 30' 36" N 148º 33' 54" W. Between check valves 13 & 14.

Alyeska Pipeline Service Company. Trans Alaska Pipeline System Pipeline, Oil Discharge Prevention and Contingency Plan, 2011: Sagavanirktok River Contingency Area 1, Prudhoe Response Base. C-Plan Map 7; Aerial Map 29

Spill: The release rate is estimated at 280 bbl/minute. Oil is flowing east and north into the Sagavanirktok (Sag) River and adjacent tundra, marshes, and ponds. Break-up of the Sag River is in process. High river flow, ice flows, intermittent ice jamming, unstable ice & conditions along river banks and adjacent tributaries.

The Sag River outflow overflows the Beaufort Sea sea ice creating Strudel-Scour drainage into the Beaufort along Sag River Delta. The river flows at 3.5-5 mph, decreasing to as slow as ½ mph where channels merge to form "lakes." Oil is expected to reach the Beaufort Sea approximately 12 hours after it reaches the Sag River.

Date/Time: May 25, 07:00AM

On-scene Weather: 36° F, Freezing Rain; Winds SW @ 18-32 mph

Sensitive Areas at Risk: Specific information on resources at risk can be extracted from the Sensitive Areas Section in consultation with the resource trustees. The priority environmental areas include the tundra, marshes and ponds; the Sag River and Beaufort Sea.

The Sag River is an anadromous fish stream. Arctic Grayling and Arctic Char use the Sag River side channels during break-up and open water months. Critical periods for Arctic grayling spawning occur during May and June, with the Ghost Creek complex (PLMP 40-45) of critical sensitivity for spawning and rearing. Waterfowl nest all along the Sag River, including spectacled and stellar eiders, yellow billed loons. Peregrine Falcon nesting areas are located in the Franklin Bluffs and Sagwon Bluffs. The adjacent habitiat is also some to mammals, including caribou and brown bears.

Downstream, the Beaufort Sea is critical wildlife habitat for Polar Bears and Bowhead Whales. Other species in the Beaufort Sea include seals, walrus, shellfish, subsistence fish, waterfowl and seabirds, plankton and lower trophic organisms.

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.

6. Initial Actions:

a. **Notification:** Operations control center detects the spill from the pipeline leak detection system and notifies North Slope mutual aid partners including Alaska Clean Seas. Alyeska personnel immediately notify the NRC and the ADEC. NRC notifies EPA Region 10 Alaska Operation's Office personnel who then notify appropriate Federal agencies including Natural Resource Trustees.

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
*** North Slope Borough
*** Local Emergency Managers of directly impacted communities
*** Federally-recognized tribes in impacted communities

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

b. **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.

- 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 Sag 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 COSC's Historic Properties Specialist.

c. **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 develop *in situ* burning (ISB) plan, in accordance with the ISB Guidelines in **Unified Plan, Annex F** for consideration and to begin marshaling resources for burning activity. This will include preparations for air monitoring for particulates.
- Instruct PRP to determine his/her ability to mechanically recover spilled product prior to reaching Sag River; in Sag River under different anticipated conditions (open water, fully iced and break-up conditions); in Beaufort Sea/sea ice.
- Evaluate capability to contain and recover oil in 100% ice cover conditions in Beaufort Sea using innovative techniques appropriate to arctic conditions.

e. **Initial Response Actions:**

- *Secure the Source. The pipeline is immediately shutdown and spill response team personnel mobilize with equipment to locations preplanned in Alyeska's contingency plan.*
- Activate the response structure to the Spill of National Significance (SONS) level.
- *The Federal/State Unified Plan and North Slope 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 Alyeska's 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 Alyeska's emergency operations center in Fairbanks, AK.. Additional initial Unified Command tasks include:

1. Evaluate PRP'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- Plan for Prudhoe Bay.
6. 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 clean up 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 established Geographic Response Strategies (GRS), when possible.
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts. Estimate locations and time of travel of oil into the Sag River. Estimate time of oil discharge into the Beaufort Sea.
- Establish local (Anchorage) command post while individuals are en route to the field command post and plan for relocation to Prudhoe Bay.
- 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 the ice conditions in the Beaufort Sea. *In situ* burning is an appropriate measure and warrants further consideration and planning. Complete the ISB Guidelines for Alaska, Application and Burn Plan and the FOSC/SOSC Review Checklist found in the **Unified Plan, Annex F**.
- Schedule routine overflights of the impacted 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.)
    i. Initiate wildlife hazing.
    ii. Additional measures may be initiated during subsequent operational periods, beyond the initial response.
- 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?
- Considerations for future actions:
    - Possible transfer of authority from EPA to CG if much of the impact is to the coastal zone.
    - Determine any fisheries impacts, including subsistence fisheries, and take appropriate action.

7. Spill Response Organization:

A spill of this magnitude would normally 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice to the Unified Command.

8. 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 Alyeska Pipeline's Trans Alaska Pipeline System, Pipeline Oil Discharge Prevention and Contingency Plan, response tactics to contain and cleanup the spill are implemented. Primary objectives are:
    - Prevent oil from reach the Sag River.
    - Contain oil in side channels of the Sag River.
    - Prevent oil from reaching Beafort Sea.
    - Minimize disturbance of raptor nests by aircraft.

  Tactics to achieve these objectives include:
    - Contain spill, to extent possible, to pipeline right-of-way with berms and channel plugs and by blocking drainage structures.
    - Oil in Side Channels: If ice conditions permit, use booms to contain oil in the side channels of the Sag River.
    - Oil in Main Channel: Depending on ice conditions in the main channel, booms and berms should be used to divert oil into designated containment areas or along the shore.
    - Oil in permeable thaw-stable soil: Construct transverse ditches downslope of spill site.
- Evaluate/determine feasibility of *in-situ* burn.
- 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 procedures for on-ice/under-ice recovery are located in the Alaska Clean Sea Technical Manual (http://www.alaskacleanseas.org/tech-manual/).

9. Response Requirements:

a. **Equipment:** The nearest equipment will be located at Pump Station 2. This *equipment staged will need to be augmented with additional equipment, including but not limited to boom, vacuum units, super suckers, earth moving equipment and other oil recovery equipment to insure timely recovery. It is possible that additional equipment can be brought in a timely manner from North Slope mutual aid partners to respond to this spill volume. Cold weather could complicate recovery operations by disrupting the effective use of the various pieces of equipment.*

Quick deployment of containment measures, high volume oil recovery equipment and other mechanical collection equipment is essential to ensure success of the response and to mitigate spill damage. A spill of this size and location will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. Section B of this plan (North Slope SCP) includes a list of some of the

equipment available in or deployable to the North Slope subarea. In addition, ACS maintains a list of their equipment in the ACS Yearbook.

b. **Personnel:** Initial Alyeska response personnel would likely have to be augmented by ACS and mutual aid partners. The Alyeska and ACS crews should be capable of deploying equipment and recovering product with assistance of other partners.

c. **Additional Mobilization of Government Personnel:** This scenario contemplates an adequate response by Alyeska and ACD. In such an instance the Federal On-Scene Coordinator and State On-Scene Coordinator will provide oversight of the response through the Unified Command. Additional federal and state agencies with roles and responsibilities in the federal and state response systems as detailed in the National Contingency Plan and the Alaska Unified Plan will be integrated into appropriate sections within the incident command system. The following provides examples of such integration but is not meant to be totally inclusive of all-possible roles and responsibilities for assisting agencies.

Operations oversight of field teams will be accomplished by placing government monitors from EPA, US Coast Guard's Pacific Strike Team, and ADEC personnel with industry task forces.

Shoreline Clean up Assessment Teams utilized to survey spill impacted areas and recommend treatment methods will be composed of EPA, ADEC, state land managers, cultural resource specialists and industry representatives. Composition of teams will follow general guidance found in NOAA HAZMAT publications, the North Slope Shoreline Oil Spill Countermeasures manual, and other pertinent documents.

Individuals from USFWS and ADF&G will monitor wildlife teams involved in hazing and capture.

The Incident Management Team's planning section will be supplemented with technical specialists from the following government agencies;

- Waste Management - EPA / ADEC / NSB
- Pipeline Repair – US DOT PHMSA / ADEC
- Wildlife Protection – USFWS / ADF&G
- Cultural Resource Protection – Federal & State Cultural Resource Contract Specialists
- Land Management – ADNR & NSB

These personnel will facilitate the overall response operation by assisting the FOSC and SOSC in authorizing and permitting activities under their jurisdiction when appropriate. This is not an all-inclusive list.

10. Resource Availability and Resource Procurement.

For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (EPA, USCG, State of Alaska, Alyeska, ACS) that would allow the resources of the spill cooperatives 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. The PRP and ACS 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 PRP's responsibility. A spill of this magnitude would likely exceed $1 million each day during the initial stages of the response. Committing this volume of funds in a short time is essential. Failure, on the part of the PRP, 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 PRP is unable or unwilling to pay the costs of the spill response. 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.

11. Shortfalls

a. **Equipment:** The primary equipment shortages are expected to in regards to specialized transportation equipment: helicopters, Rolligons and air boats. Adequate PPE on or near water will also be a concern and not initially available in adequate quantities. “Mustang” suits, float coats, dry suits, or inflatable PFDs will be preferable for sustained operations compared to cool weather clothing plus a standard PFD.

b. **Personnel:** None anticipated.

(1) Housing – Prudhoe Bay hotels/dormitories and potentially on-site “field camps” will be required to sustain the response. Several organizations in Alaska cater "field camp" setups which include housing and feeding facilities. These facilities are available in flyaway form. However, these camps may have limited availability/already be in use by late May. It is expected that field camp facilities for housing, dining and work space will need to be transported to the site and/or Prudhoe Bay from vendors in the Lower 48. This may take several days to arrange, transport and set-up. Additional considerations for a field camp will include water, electricity and heating. Depending on the location(s) of field camps, existing gravel pads may not be sufficient for staging. The surrounding tundra is in the process of thawing – arrangements will need to be made with ADEC and industry for the construction of additional gravel pads or re-siting camp and staging area locations.

(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. However, catering service may need to be brought in from either Fairbanks or Anchorage, AK.

(3) Fuel – Fuel is transported daily to Prudhoe Bay via multiple trucks. Arrangements for remote fueling stations would need to be arranged to supply the numerous vehicles and equipment operating in the area.

(4) Transportation: Prudhoe Bay is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported to the area via the Dalton Highway or by air into Prudhoe Bay. Personnel would arrive via air to Prudhoe Bay. Favorable weather conditions are also a major factor in both air transportation for personnel and equipment.

Transportation across Tundra: The Alaska Department of Natural Resources has closed the tundra for transportation and other activities. A variance will be required to transport personnel and equipment to the Sag River and adjacent lands. A Rolligon will be required for transportation across the tundra. Other vehicles will be unable to traverse the conditions and/or cause either an unacceptable amount of damage.

Air Transportation: Helicopters will be required to transport personnel to areas inaccessible by Rolligon. Fixed wing aircraft may be utilized for overflights to assess conditions, but will have limited functionality in other response activities. Activities on the Beaufort Sea will require helicopter transportation and support until the open water season, 2+ months after the spill.

Boats: Boats will not be deployable into the Sag River until the river is ice-free. Side channels may be ice-free prior to the main channel, allowing for limited operations. The number of readily available boats, capable of handling the conditions of the Sag River will likely be limited to those in the ACS inventory.

Travel on the Beaufort Sea: At the time of the spill, the Beaufort Sea ice is beginning to break up. An open water bay is forming at the Sag River delta. There is no precedent for safe travel across or operations on sea ice in these conditions. Vessel operations will be restricted until the open water season, expected to begin between late July and early August. Initial transportation and operations on the sea ice will be by helicopter.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

c. **Funding:** Funds availability and access should pose no problem regardless of the financial capabilities of the PRP. 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:** Emergency response personnel should respond as soon as possible to the spill site with safety parameters in mind. Estimated time from Pump Station 2 to the spill site is XXX minutes. Estimated time from Prudhoe Bay to the spill site is XXX hours. *{Note: Times to be inserted after input from ACS and/or Alyeska}*

12. Spill Cleanup Timetable:

The spill response will continue until all recoverable oil is collected. Riverbank cleanup will begin as soon the river is ice-free and navigable. Operations in the Beaufort Sea may be hampered and/or delayed due to the sea ice, which has not yet melted. Shoreline cleanup will begin as soon as possible. On-land cleanup will continue until all recoverable oil is collected and satisfactory soil cleanup levels are reached, as determined by ADEC. The initial response phase is expected to transition to a management phase after 1 month. Shoreline cleanup will continue until freeze-up.

Ongoing monitoring may continue beyond this period. Depending on the extent of oil released into surrounding tundra and muskeg or to wetlands adjacent to the Sag River, oil may continue to leach out for an extended period of time, and would require monitoring.

13. Disposal Options: Debris disposal is the responsibility of the PRP. 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 PRP 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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. Also, areas designated for cleaning contaminated equipment must be able to handle the contaminated runoff.

14. 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 SCENARIO

1. **Situation:** An oil transit pipeline between Gathering Centers (GCs) leaks as a result of corrosion of the pipeline wall. The gathering centers are located within an oilfield operated by BP Exploration Alaska, Inc. (BPXA). The transit pipeline, which is positioned on a support rack several feet above the tundra, carries processed crude oil. The small diameter leak is not detected for several days. The oil migrates under snow cover to adjacent tundra until it is detected by odor by passing oilfield employees.

2. **Location:** Between GC2 and GC1 at a location where the pipeline passes through a caribou crossing. The site is at latitude 70.307° N and longitude 148..816°W

3. **Spill Information:** On March 2 at approximately 6:00 AM, BPXA employees discover a release of crude oil from a 34-inch diameter pipeline. Approximately 200,000 gallons of crude oil is released to adjacent tundra, impacting an area of about 2 acres. The oil migrated along the frozen tundra surface, under snow, to the edge of a frozen lake. Winter weather conditions exist.

Date: March 2

On-Scene Weather: Winds N @ 20 kts
Temperature -32° C (-25° F) with wind chills to -51° C (-60° F)
Daylight Approximately 9 hours per day

Ground conditions: Snow-covered frozen tundra with ongoing drifting snow throughout the response

4. **Cargo Salvage:** Not applicable.

5. **Sensitive Areas at Risk:** See Sensitive Areas Section of this plan.

6. **Initial Actions:**

a. **Notification:** BPXA personnel immediately 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.

FOSC (EPA will notify the following):

*** ADEC (also notified by the responsible party)
* ADNR
* ADF&G
* ADMVA/DHSEM
*** ARRT
*** NRC
*** NOAA Scientific Support Coordinator
** NSF
** NPFC
*** Local Emergency Managers of directly impacted communities

*** = Notification by FOSC
** = Message notification
* = Notification by State

b. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene. Begin recall of local in-house personnel (EPA, ADEC, ADNR, etc.) as needed to support 24-hour operations for a spill of this magnitude.

c. **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. All information must 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.

d**.** **Initial Response Actions:** BPXA immediately takes steps to shutdown the pipeline and mobilize spill response team personnel and equipment to the incident site. Within hours of the leak discovery, BPXA activates their Incident Management Team (IMT), establishes an emergency operations center at the Prudhoe Bay Operations Center (PBOC) housing/operating facility, and activates their primary oil spill response contractor, Alaska Clean Seas (ACS).

By 1100 hours ACS personnel have mobilized to the site and confirmed the presence of oil on the ground around the GC2 oil transit pipeline. Overflights of the site by aircraft equipped with forward-looking infrared radar (FLIR) are initiated to assess the extent of contamination.

An EPA FOSC and an ADEC SOSC travel to the North Slope and establish a Unified Command with BPXA's Incident Commander and a representative of the North Slope Borough by the evening of March 2. BPXA and its contractors continue ramp up activities to support 24-hour operations.

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 Federal/State Unified Plan and North Slope Subarea Contingency Plan are also implemented.

The ADEC SOSC and EPA FOSC also activate the ADEC term contractors and EPA START contractors, respectively. The contractors are mobilized to assist with the federal and state oversight operations.

State field observers are deployed to the release site to monitor clean up operations and advise the FOSC and SOSC of the status of on-going operations.

Initial response actions and objectives include:
- Ensure health and safety of personnel
- Activate the response structure to the level deemed necessary
- Complete notification procedures

- Mobilize resources to the North Slope
- Establish source control
- Determine spill path, resources at risk and wildlife impacts
- Prepare Initial POLREP (EPA)
- Prepare Initial SITREP (State)
- 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 cleanup impractical?

    3) Can equipment be deployed without excessive risk to the life and health of personnel?

7. **Spill Response Organization:** Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, PRP's Incident Commander, and local community liaison. 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.

8. **Containment, Countermeasures and Cleanup Strategies**: The initial assessment of the area by spill responders and FLIR indicates oil migrated under snow away from the transit pipeline. Sufficient mobile oil is pooled adjacent to the pipeline to allow for recovery by vacuum truck or supersucker.

Initial response operations include operation of multiple vacuum trucks to recover mobile oil. Recovered oil is transported to a storage tank at Flow Station 2 for storage and subsequent measurement. Assessment teams are deployed to determine the limits of the impacted area. Equipment is utilized to create snow berms around the area to limit additional migration of oil and create a visual demarcation of the impacted area. Ice-auguring conducted at the lake determines that the lake is completely frozen.

Teams are established to assess the pipeline and locate the leak. Exposed segments of the 3 mile pipeline are covered with insulation. The pipeline also transverses several caribou crossings, which makes it difficult to determine the exact location of the leak.

Removal of contaminated snow is employed for areas where recovery by vacuum truck is not feasible. Contaminated snow was transported offsite to a nearby pad for melting and recovery of oil. Once free-product recovery efforts slow, cleanup work transitioned into a surface remediation effort consisting of the removal of contaminated ice and tundra vegetation by trimming.

The weather conditions and logistical difficulties in mobilizing necessary equipment to the site will make this operation a challenge. The PRP also must take actions to protect wellheads and other facilities that had to be shutdown in order to stop the flow of oil within the transit pipe.

9. Response Requirements:

a. **Equipment:** The equipment maintained by ACS and BPXA may need to be augmented with vacuum units, supersuckers, and possibly other oil recovery equipment from mutual aid partners to insure timely recovery. It is possible that additional equipment can be brought in a timely manner from Fairbanks to respond to this spill volume. Cold weather could complicate recovery operations by disrupting the effective use of the various pieces of equipment.

b. **Personnel:** Initial BPXA response personnel would likely have to be augmented by their contractors on call for oil spill response and recovery. The BPXA crew should be capable of deploying equipment and recovering product with assistance of their contractors. It is expected that moderate numbers of Federal/State personnel would be required on scene. Trustees and other agencies may require augmentation or additional manpower to deal with this spill. ACS (the oil spill response organization under contract with BPXA) may need to augment its personnel with responders from other organizations within the state.

10. Resource Availability and Resource Procurement. The PRP provides all spill response related equipment with their contractors supplementing any shortages. 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.

11. Shortfalls

a. **Equipment:** Oil recovery equipment, personal protective equipment, and proper clothing for cold weather operations are a primary concern.

b. **Personnel:** None anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to Federal and State capability to access their respective spill funds if necessary.

d. **Minimum Response Times:** Emergency response personnel should respond as soon as possible to the spill site with safety parameters in mind.

12. Spill Cleanup Timetable:

a. **Mechanical Cleanup Only:** Mechanical cleanup time will depend on weather conditions, which severely hamper site operations. Follow up operations may be needed following breakup to address any areas missed during winter operations. Monitors will have to be employed to patrol the area during and after breakup to report observed oil for collection and recovery.

b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

13. Disposal Options: Debris disposal is the responsibility of the PRP. Oil contaminated debris will likely be produced. The PRP must dispose of contaminated debris according to existing laws. The PRP will typically be knowledgeable in the methods and requirements for disposing of oiled debris. A Waste Management Plan will also be developed and approved by the Unified Command.

14. **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 tundra, adjoining shorelines, or 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 and welfare; and

d. Activities required to repair unavoidable damage resulting from removal actions have been performed.

C. AVERAGE MOST PROBABLE SCENARIO

1. **Situation:** A dump truck departs Fairbanks en route to Deadhorse, leaves the roadway and overturns on the Dalton Highway.

2. **Location:** The truck overturns at Dalton Highway milepost 318, which is approximately 100 miles south of Deadhorse near Pump Station 3. Polygon Creek is adjacent to the highway at this location.

3. **Spill Information:** The truck was hauling rock to the North Slope. Multiple vehicle fluids were released when the truck overturned including 200 gallons of diesel fuel (from the saddle tanks), 30 gallons of hydraulic oil, and 15 gallons of motor oil. The fluids impacted snow, tundra and the frozen bed of Polygon Creek.

Date: November 21
On-Scene Weather: Winds: Light winds, variable
Temperature: -5° C (23° F)

4. **Cargo Salvage:** Most of the fuel in the saddle tanks was lost when the truck overturned. A small amount of residual fuel was lightered from the tanks when the truck was uprighted.

5. **Sensitive Areas at Risk:** See Sensitive Areas Section of this plan.

6. **Initial Actions:**

a. **Notification:** The truck driver contacts his dispatch center and informs them of the accident. Trucking company 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.

FOSC (EPA will notify the following):

*** ADEC (also notified by the responsible party)
* ADNR
* ADF&G
* ADMVA/DHSEM
*** ARRT
*** NRC
*** NOAA Scientific Support Coordinator
** NSF
** NPFC
*** Fairbanks North Star Borough
*** NSB Local Emergency Manager

*** = Notification by FOSC
** = Message notification
* = Notification by State

b. **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. Establish contact with the responsible party as quickly as possible,

preferably an individual on scene. Begin recall of local in-house personnel (EPA, ADEC, ADNR, etc.) as needed to support a spill of this magnitude.

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

- Dispatch representatives to the scene at the earliest opportunity.
- FOSC/SOSC/PRP establish direct communications
- Ensure health and safety of all individuals
- Coordinate with local emergency response personnel to establish a Safety Zone

d. Initial Response Actions:

- Stop any discharge from the truck, if possible
- Maintain a safety zone
- Ensure proper PPE is available and used by responders
- Activate the response structure to the level deemed necessary
- Establish a command post
- Evaluate PRP's initial actions and evaluate capability to carry out response
- Prepare Initial POLREP (EPA)
- Prepare Initial SITREP (State)
- Ensure development of a Site Safety Plan
- 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 cleanup impractical?

    3) Can equipment be deployed without excessive risk to the life and health of personnel?

7. Spill Response Organization: Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, PRP's Incident Commander, and local community liaison. 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.

8. Containment, Countermeasures and Cleanup Strategies: The utmost concern in this scenario is safety due to physical hazards at the site from winter weather conditions. Initial response includes removing grossly contaminated snow and soil by hand. Contaminated willow vegetation is cut and removed. There is now running water in Polygon Creek at the time of the incident. Remediation of contaminated soil will likely be a follow-on project but is not considered part of the response.

9. Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Personnel will be provided by the PRP and/or their contractors. One responder from the ADEC NART mobilized to the site to oversee response operations. The EPA FOSC will maintain communications with the ADEC to monitor the release.

10. **Resource Availability and Resource Procurement:** The PRP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the PRP to respond to this event. Out of region resources are not considered viable for this response. However, out of region resources could be used in the remediation phase if the soil is deemed contaminated and the regulatory agencies require remediation.

11. **Shortfalls**

a. **Equipment:** No shortfall of cleanup equipment anticipated. Personal Protective Equipment for individuals requiring immediate access to the spill site could be a potential shortfall.

b. **Personnel:** No shortfalls in personnel anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to Federal and State capability to access their respective spill funds if necessary.

d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

12. **Spill Cleanup Timetable:**

a. **Mechanical Cleanup Only:** Cleanup unlikely by mechanical means.

b. **Mechanical in Conjunction with Non-Mechanical:** Non-mechanical options are not considered viable for response to this scenario.

13. **Disposal Options:** Debris disposal is the responsibility of the PRP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The PRP will prepare a cleanup/waste disposal plan and submit to ADEC for approval.

14. **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, adjoining shorelines, or 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 and welfare; and

d. Activities required to repair unavoidable damage resulting from removal actions have been performed.

NORTHWEST ARCTIC
SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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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 ADEC Spills Database and the NOAA Scientific Support Coordinator 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.

Bulk ore carriers destined for Red Dog Mine are the majority of large vessel traffic for the area. Approximately 65 bulk ore carrier vessels over 20,000 gross tons transit the area annually. Chemical cargos include zinc slurry, zinc concentrate, magnesium oxide or propylene glycol. Foreign-flagged vessels transiting through this area may or may not have a federal tank or non-tank vessel response plan and Western Alaska geographic specific appendix, depending on whether they make US ports of call.

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

C. VULNERABILITY ANALYSIS

The natural habitats of the North West Arctic Subarea support extensive fish and wildlife populations that are extremely important to the social, economic, and cultural welfare of local residents. Offshore areas support a highly productive marine ecosystem, rich with intertidal, benthic, and pelagic plant and animal life that, in turn, provides nourishment for extensive populations of marine and anadromous finfish, shellfish, seabirds, and marine mammals. Rocky shorelines and cliffs provide nesting areas for seabirds.

There are a total of 31 towns and villages in the subarea. Deliveries of non-crude oils are made to these locales primarily by barges operating from Dutch Harbor or Cook Inlet. Deliveries are ice dependent, and do not occur as ice forms. Human activities in the Arctic and Subarctic regions revolve around the subsistence, sport, and commercial uses of fish and wildlife. Infrastructure development is minimal by national standards.

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.

An overview of oil fate analysis can be found in Section E, Part 3, D (Oil Fate and General Risk Assessment) of this plan.

D. SEASONAL CONSIDERATIONS

In the Bering Sea, the sea ice generally begins as fast ice formation along the shores of the Seward and Chukhotsk peninsulas in October. In November, as the cold weather continues and the waters in the open portions of the Bering Sea cool, the pack ice begins its seasonal southward formation. An estimated 97% of the ice in the Bering Sea is formed within the Bering Sea; very little is transported south from the Arctic Ocean through the Bering Strait. During periods of increasing ice and prevailing northerly winds, the ice moves southward with the wind before melting at its southern limit. During periods of southerly winds, ice coverage generally decreases in the Bering Sea, causing a wide variation in ice cover from month to month.

Portions of the region are in the arctic, transitional, and continental climatic zones. Permafrost underlies much of the region. The weather in the region is the result of the interaction between global air movements, land topography, and major weather systems that move north-south and east-west across the Bering Sea.

The larger river basins in the region include the Noatak, Kobuk, and Koyuk rivers. Marine waters associated with the region are comprised of the Chukchi and Bering Seas. Sea ice formation in the Chukchi Sea can begin in October and spreads south into the Bering. The ice pack can persist through late June, although the ice begins to melt and break up in April. The entire marine area of the region lies within the continental shelf.

An overview of wind, tide, ice and current conditions from the Bering Sea to the Chukchi Sea; including the Bering Strait, Norton Sound, and Kotzebue Sound can be found in Section E, Part 3, E (Ice, Wind and Currents) of this plan.

SCENARIOS: PART ONE - COASTAL OIL

A. WORST CASE SCENARIO

Size of the Discharge: 400,000 gallons (of the 624,000 total capacity) of a freight vessel's heavy fuel oil.

Event Description: The M/V United Ocean, a freight ship, is offshore and enroute to the Delong Mountain Terminal of the Cominco/Red Dog Mine to load a cargo of ore bound for British Columbia, Canada. For unknown reasons the vessel experiences a fire in the engine room and loses rudder control and propulsion. Prevailing winds and marginal sea conditions drive the vessel aground onto Little Diomede Island in the Bering Straight. The fire burns uncontrolled for over a day and the force of the grounding compromises the hull, resulting in a release of heavy fuel oil. The crew abandons ship and is rescued by a Coast Guard helicopter.

Location: Approximate position- Latitude 65° 45'N; Longitude 168° 56'W.

Spill: There is a steady release of fuel oil (4,000 gals/day) for two days, then slower release of 1,500 gals/day for the next several days. The vessel was carrying a total of 624,000 gallons of heavy fuel oil, 22,000 gallons of diesel fuel and 2000 gallons of lube oil.

Cargo Salvage: The ship is determined to be salvageable, although lightering cannot be accomplished due to the fire and general instability of the ship.

Date: May 10

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 immediate area of the spill that are at risk include sea lions, walrus, polar bears, seals, subsistence fishing, waterfowl concentrations, historic properties and seabird colonies.

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 Little Diomede and Wales. In addition, several downstream communities 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 ensure the following are notified:
   * ADNR
   * ADMVA, DHSEM
   ** ADF&G
   ** ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
   ** CGD17 Command Center, to activate support resources including:
      - District (m), Marine Safety Division
      - District (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
   *** Northwest Arctic Borough
   *** Federally –recognized tribes in affected communities
   *** DOC

   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 through D17 OPCEN to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated. Request USCG cutter support 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.
- As needed: Consult with DOI and DOC and the State of Alaska on potential resources at risk
- As needed: Conduct Endangered Species Act consultation with DOI and DOC.

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 fuel 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 Incident Command Post (ICP), if it is established in the field. If no ICP is established, consider using USCG Sector Anchorage training room as the initial Command Post while USCG/ADEC personnel are enroute to the field Command Center.

4. 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 NW Arctic Subarea Contingency Plan and Annex O of the Alaska Unified Plan.
- Take actions to stabilize the vessel. Notify USCG Marine Safety Center of vessel information and situation. Request stability information.
- Develop containment/booming plan for implementation as weather abates.
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas. Utilize established Geographic Response Strategies (GRS), when possible.
- Place firefighting resources on standby in the event fire breaks out. Resources outside the state will likely be required in the event of fire.
- Evacuate any injured personnel or unnecessary crew members.
- 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:

15. Evaluate RP's capability to carry out an appropriate response.
16. Determine name of incident.
17. Determine goals and objectives
18. Determine UC staff and size - Liaison and RSC positions are critical for this region.
19. Establish an appropriate ICP to support UC activities in Anchorage, AK.
20. Establish an appropriate Forward Operating Base in Nome, AK.
21. Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.

- 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.
- 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.
- 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.
- Determine any fisheries impacts, and take appropriate action.
- Consider alternatives to mechanical response: dispersant application, *in situ* burning, or destruction of entire vessel and cargo by burning.
- Schedule routine overflights of the impacted area. Request USCG 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.
- Receive recommendations from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program.)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

A spill of this magnitude could be declared a Spill of National Significance (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 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. The Regional

Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice 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 migratory bird deterrent, capture and treatment program is in place.
- 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 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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. A complete list of available equipment for the Northwest Arctic subarea is located in section B of this plan. Equipment stored readily available in Nome by ACC is located at https://www.chadux.com/services/response-hubs/.

b. Vessels, Skimmers, Boom, and other Spill Response Equipment:

(1) 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 include, but are not limited to the following:

Skimmers

- Transrec 200
- Desmi ocean
- Foxtail
- Lori side collection
- Dynamic inclined plane
- Vikoma SS50
- Desmi 250

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 also in local inventories.

Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 are located in 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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

Personnel: Initial personnel activation will require several hours to days. The Northwest Arctic subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities.

8. Resource Availability and Resource Procurement

For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (USCG, State of Alaska, Chadux, ACC, CISPRI, ACS, SERVS) that would allow the resources of the spill cooperatives 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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 issues):
(1) Housing – Local hotels, seafood processing facility mancamps, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the subarea. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Kotzebue and Nome are the only major commercial airports located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported overwater or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 24-hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the sea state and weather in the incident area.

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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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

The maximum most probable case is determined by the largest recorded oil spill to date in the Northwest Arctic subarea. The largest to date was the M/V Cape Nome grounding. During this event, a total of 20,000 gallons of diesel were released.

Size of the Discharge: 20,000 gallons (of the 725,000 total capacity) of a barges cargo.

Event Description: The fuel barge planning to refuel the Alaska Village Electric Cooperative facility site in Kiana strikes a partially submerged object en route to the marine header. The object struck is unknown. The vessel continues to the location having no direct indication of damage since no product is seen escaping. Apparently, as long as the vessel is underway, fuel does not escape from the damaged tanks. But after the vessel moors up, awaiting fuel transfer, free product is detected on the water.

Location: Approximate position - Latitude 66° 58' N, Longitude 160° 26' W.

Spill: Approximately 500 bbls of arctic diesel are released over a one hour period.

Cargo Salvage: Crew begins transferring fuel as necessary to maintain stability and attempt to hydrostatically load the damaged tanks. Salvage of the remaining cargo is successful.

Date: April 10

On-scene Weather: Winds: E @ 20 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include sea lions, otters, waterfowl concentrations, and seabird colonies.

The shoreline geomorphology in the immediate vicinity of the spill is sheltered tidal flats. 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 Noorvik and Okok Point. In addition, several downstream communities would be impacted by this spill.

Initial Action Description:

13. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

14. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on

scene. Begin recall of local in-house personnel (USCG, ADEC, ADNR, etc.) as needed to support 24-hour operations for a spill of this magnitude.

15. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:** Dispatch pollution investigators (Sector 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. All information must 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.

16. **Initial Response Actions:**
    - Dispatch rep from Sector Anchorage and ADEC NART (Fairbanks) as needed
    - Stabilize the vessel
    - Secure the source of discharge through fuel transfer
    - Ensure health and safety of personnel
    - Complete notification procedures
    - Activate the response structure to the level deemed necessary
    - Through SSC interaction, determine spill path, resources at risk and wildlife impacts
    - Prepare Initial POLREP (USCG)
    - Prepare Initial SITREP (State)
    - Establish Anchorage-based command post for FOSC/SOSC and Staff
    - FOSC/SOSC will operate from offices and will not travel to the scene
    - 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 cleanup impractical?
        3) Can equipment be deployed without excessive risk to the life and health of personnel?

    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. Only when the group has reached an impasse and the timeliness of the situation requires action will the FOSC make unilateral decisions.

17. **Containment, Countermeasures and Cleanup Strategies**: Immediate containment is required to mount an effective recovery operation. Vessel crew deploys response equipment carried aboard as required by the Vessel Response Plan. Containment boom is deployed and approximately 40% of the released product is contained and skimming begun.

    Natural dispersion and evaporation will act to remove the product from the water surface. A spill of this volume will spread, disperse, and evaporate making recovery, if not initially contained, very difficult.

    In situ burning and dispersant strategies will not be employed.

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 may make "chasing" this oil spill infeasible.

18. **Response Requirements:**

    a. **Equipment:** The equipment required in the State and Coast Guard vessel response plans should adequately address this spill. It is unlikely that additional equipment can be brought to bear in a timely manner and at a reasonable cost to respond to this spill volume. Natural processes will drastically reduce the spill volume in a matter of hours rather than days.

    b. **Personnel:** Expect to use only on board personnel for this response. The crew should be capable of deploying equipment and recovering product without assistance. Trustees and other agencies should not require augmentation or additional manpower to deal with this spill.

19. **Resource Availability and Resource Procurement:** Resources should be on hand to deal with this spill. The volume of product that can be expected to be recovered will be relatively small and additional resources will probably be unnecessary by the time they arrive on scene.

20. **Shortfalls**
    a. **Equipment:** None anticipated.
    b. **Personnel:** None anticipated.
    c. **Funding:** No funding problems anticipated.
    d. **Minimum Response Times:** Vessel owner should comply with the approved vessel response plan. If these response times are met, response should be adequate assuming the crew acts quickly to contain the product being released as soon as it's detected.
21. **Spill Cleanup Timetable:**
    a. **Mechanical Cleanup Only:** Two days.
    b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

22. **Disposal Options:** Debris disposal is the responsibility of the RP. A small volume of oil contaminated debris will likely be produced. The RP must dispose of contaminated debris according to existing laws. The RP will typically be knowledgeable in the methods and requirements for disposing of small quantities of oiled debris.

23. **Cleanup Termination**. Termination of cleanup should be a joint decision by the Unified Command based on the following criteria:
    h. 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
    i. Further removal operations would cause more environmental harm than the oil to be removed; or
    j. 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.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case is determined by the greatest percentage of average spills in the area over the past ten years. For the Northwest Arctic Borough, over 50% of oil spills were less than 10 gallons with storage facilities accounting for 90% of spill locations.

Size of the Discharge: Approximately 50 gallons of No. 1 diesel fuel.

Event Description: A lightering vessel is transferring fuel to the Elim AVEC bulk fuel storage facility when the 4 inch transfer hose ruptures near the marine header.

Location: Approximate position - Latitude 64° 37' N, Longitude 162° 15' W.

Spill: Approximately 50 gallons of arctic diesel.

Cargo Salvage: Upon discovery of the rupture, the transfer pump is secured and the valves at the marine header and aboard the lightering vessel are closed, preventing the loss of additional cargo.

Date: April 10

On-scene Weather: Winds: W @ 25 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include sea lions, otters, waterfowl concentrations, and seabird colonies.

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 are not expected to be impacted from this spill. The Sensitive Areas Section provides a framework for identifying any at-risk resources.

Initial Action Description:

11. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

12. **Response Activation**
    i. 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.
    ii. Ensure that responsible party (RP) is notified and responding.
    iii. Establish contact with the responsible party ("qualified individual") as soon as possible, and preferably with an individual on scene.
    iv. 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.

v. 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.
vi. Draft POLREP (USCG) and SITREP (ADEC) and distribute.
vii. Dispatch representatives to the scene at the first opportunity.
viii. FOSC/SOSC/RP Representatives establish direct communications.
ix. Ensure health and safety of all responders.
x. Establish Safe Zone around spill area to prevent explosion, if necessary.
xi. Evaluate slick size, direction, area of coverage, proximity to shore, wildlife impacts, wildlife observed in area, on-scene weather, etc.
xii. Determine what response actions have occurred or are underway.
xiii. Issue Notice of Federal Interest and State Interest to RP.

c. Initial Response Actions On-Scene:

- Alert vessel tankerman to secure pumping
- Secure electrical power and sources of ignition
- Close valves to prevent the flow of fuel through the ruptured hose
- Maintain a safety zone due to health hazards; evacuate personnel as necessary
- Ensure proper PPE is available and used by responders
- Alert the Northwest Arctic Borough to activate the initial ICS
- Contain and recover the charged product
- Properly dispose of recovered oil and oily waste
- Properly decontaminate all oiled response equipment

d. Initial Agency Evaluation and Recommendations:

- FOSC/SOSC/RP establish direct communications
- Evaluate the RP's response capabilities
- As required, dispatch representatives to the scene at the earliest opportunity
- Ensure health and safety of all individuals
- Coordinate with local emergency response personnel to establish a Safety Zone, as necessary
- Determine feasibility of removal actions based on the following considerations:

    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 cleanup impractical?
    3) Can equipment be deployed without excessive risk to the life and health of personnel?

- Ensure development of a Site Safety Plan
- Prepare initial POLREP (USCG)
- Prepare initial SITREP (State)

13. Spill Response Organization: Establish the command structure as described in the Unified Plan Vol I, Annex B. Include the FOSC, SOSC, RP's Incident Commander, and local community liaison. 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.

14. **Containment, Countermeasures and Cleanup Strategies**: Due to the small amount of discharged product, nature of diesel fuel, and weather conditions, the product will likely weather quickly through evaporation and emulsification. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product through the hose and contain the spill.

15. **Response Requirements:**

    a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.
    b. **Personnel:** Facility personnel and other emergency response personnel will likely be the most crucial individuals in this scenario.

16. **Resource Availability and Resource Procurement.** The RP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the RP to respond to this event. In the event the RP does not have adequate equipment, the Northwest Arctic Borough maintains some response equipment that may be available, through appropriate agreements, for this scenario. Out-of-region resources are not considered necessary for this response.

17. **Shortfalls**

    a. **Equipment:** No shortfall of cleanup equipment is anticipated.
    b. **Personnel:** No shortfalls in personnel are anticipated.
    c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.
    d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

18. **Spill Cleanup Timetable:**

    a. **Mechanical Cleanup Only:** One day.
    b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

19. **Disposal Options:** Debris disposal is the responsibility of the RP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The RP will typically be well versed in these procedures due to the nature of their fuel handling operations.

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

h. 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
i. Further removal operations would cause more environmental harm than the oil to be removed; or
j. 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.

D. OUTER CONTINENTAL SHELF SCENARIO

Size of the Discharge: 2,160,200 bbls 25-30 API Crude Oil.

Event Description: An exploratory well experiences a blowout from the blowout preventer on the sea floor and begins releasing 61,000 barrels of oil per day (BOPD) declining to 20,479 BOPD by day 74. Winter is fast approaching. The ice edge has already passed the platform and is continuing to advance rapidly. Ice coverage exceeds 60% at the time of the spill. Estimates indicate ice coverage will exceed 75% in 30 days and approach 100% within 60 days of the initial spill date.

Location: Approximately 60 miles offshore of the North Slope District –
Lat/Long: 71º 18' 17.2 N 163º 45' 9 W

Spill: The blowout is releasing crude oil at the rate of 20,000 BOPD. Rough trajectory is based on circulation patterns, oil type and quantity, and weather. Trajectory assumes flow through low ice concentrations and should only be used for the purposes of this scenario. (Note: Trajectory information taken out of context with this scenario should not be relied upon as a forecast for actual conditions or spill events). Currents, weather and product spilled will combine to limit the spread of the slick and also keep it from traveling a great distance over this time period.

Cargo Salvage: Not Applicable.

Date: October 30

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 immediate area of the spill that are at risk include walrus, shellfish, plankton, lower trophic organisms, polar bears, seals, migratory whales, subsistence fish, waterfowl concentrations, and seabird colonies.

The shoreline geomorphology in the immediate vicinity of the spill is predominantly sand/rocky shoreline. 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. Several downstream communities 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 ensure the following are notified:

   ** ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
   * ADNR
   * BSEE/BOEM
   * ADF&G
   * ADMVA, DHSEM
   ** 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
   *** DOI
   *** DOC
   *** NOAA SSC, Scientific Support Coordinator
   ** NSFCC, National Strike Force Coordinating Center
   ** NPFC, National Pollution Fund Center
   *** North Slope Borough
   *** North West Arctic Borough
   *** Local Emergency Managers of directly impacted communities
   *** Federally-recognized tribes in impacted communities

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

2. Response Activation

   - Dispatch representatives to the scene at the first opportunity
   - FOSC/SOSC/RP Representatives establish direct communications
   - Ensure health and safety of platform crew
   - Ensure stability of platform
   - Attempt to make initial determination of cause of blowout
   - Ensure contact with BOEM/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, 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
- Consult with DOI, DOC and the State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Activate COSC's Historic Properties Specialist.

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

- Ensure notification of resource trustees using the Emergency Notification Checklist
- Evaluate the capability of the RP to carry out an appropriate response given the situation
- 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 actions are not already underway
- Instruct RP to determine his/her ability to mechanically recover spilled product before 100% ice cover
- Evaluate capability to contain and recover oil after 100% ice cover using innovative techniques appropriate to arctic conditions
- Evaluate RP's plan for securing the source

4. Initial Response Actions

- Secure the source, if possible.
- Stabilize the platform if required
- Activate the response structure to the Spill of National Significance (SONS) level
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas. Utilize established Geographic Response Strategies (GRS), when possible.
- Evacuate any injured personnel or unnecessary crew members.
- Using **Unified Plan, Annex B** Implement some or all of the Incident Command Systems (ICS) principles listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available).
    - Evaluate RP'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- Plan for Prudhoe Bay.
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
- Establish local (Anchorage) command post while individuals are en route to the field command post and plan for relocation to Prudhoe Bay.
- Prepare initial press release with the Unified Command.
- Complete notification procedures. Include up-channel notification to include the RRT, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.
- 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.
- Determine any fisheries impacts, and take appropriate action.
- Consider alternatives to mechanical response: dispersant application, *in situ* burning
- Schedule routine overflights of the impacted area. Request USCG 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.)
- 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

A spill of this magnitude would normally 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice to the Unified Command.

6. Containment Countermeasures and Cleanup Strategies

- Evaluate/determine whether a relief well is appropriate.
- Evaluate/determine feasibility of in-situ burn.
- Boom the rig at the earliest opportunity, pending favorable weather.
- Evaluate/determine feasibility of dispersants.
- Organize Shoreline Cleanup Assessment Teams 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 procedures for on-ice/under-ice recovery is located: http://www.alaskacleanseas.org/.

7. Resource Requirements

c. Equipment: Operators on the OCS are required to have oil spill response assets immediately available to respond to spills from their facilities. 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. A complete list of available equipment for the Northwest Arctic subarea is located in section B of this plan. Equipment stored readily available within the North Slope Borough by ACC is located at: http://www.alaskacleanseas.org/

b. Vessels, Skimmers, Boom, and other Spill Response Equipment:

(1) 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 include, but are not limited to the following:

Skimmers

- Lamor 30
- Lamor 12
- Manta Ray
- Skimpak 1800
- Desmi Minimax
- Stellar vac unit

- Rovac

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 also in local inventories.

Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 are located in 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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

Personnel: Initial personnel activation will require several hours to days. The Northwest Arctic subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities.

8. Resource Availability and Resource Procurement

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 the spill cooperatives 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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 issues):

(1) Housing – Local hotels, seafood processing facility mancamps, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the subarea. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Bethel is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported overwater or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 would have response personnel and equipment on scene within 24-hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the sea state and weather in the incident area.

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 November, 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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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.

SCENARIOS: PART TWO – HAZMAT

1. Situation

At approximately 10:00 am on June 1, a crew unloading hazardous cargo at the airport experiences an equipment malfunction. A pallet of batteries overturns during the unloading process and liquid is leaking from several of the batteries.

2. Location

The incident occurred on the cargo apron at the Nome Airport.

3. Release Information

Over a period of approximately 30 minutes, approximately 30 gallons of sulfuric acid has been released onto the cargo apron at the airport. The volume released begins to slow after 30 minutes, as the leaking batteries appear to be slowly emptying.

Date of Incident: June 1

On-scene Weather: Winds: Westerly at 5 mph
Temperature: 45°F
Sunny and clear, with no rain forecasted

4. Cargo Salvage

The remaining intact batteries will be segregated from the damaged batteries. The damaged batteries will be packed for shipment to a disposal facility in Anchorage.

5. Sensitive Areas at Risk

None. The accident occurred on the cargo apron at the airport and was initially contained by emergency responders.

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6. Initial Actions

a. Notification:

The cargo crew isolates the area and contacts the local emergency responders who immediately dispatch to the scene of the accident.

The cargo crew notifies the National Response Center and the Alaska Department of Environmental Conservation's Northern Alaska Response Team in Fairbanks. The National Response Center notifies EPA of the incident and the Federal On-Scene Coordinator (FOSC) is notified through channels. The Alaska State Troopers are also notified of the accident.

The ADEC State On-Scene Coordinator (SOSC) notifies the Fairbanks North Star Borough's Emergency Manager of the incident and requests that the Fairbanks Hazardous Materials (Hazmat) Team be placed on alert for possible mobilization.

b. Response Activation:

The local emergency responders review the situation and establish an isolation perimeter of at least 150 feet around the accident site (in accordance with the Emergency Response Guidebook, Guide 137).

The FOSC and SOSC confer via teleconference with the Incident Commander and confirm the contents and quantity released at the site.

The FOSC and SOSC also confer with the Fairbanks Hazmat Team and inform them of the situation and discuss possible options.

The primary objective is to ensure health and safety of all responders and the general public.

c. Initial Response Actions:

Evacuate personnel from the immediate vicinity of the accident, using the Emergency Response Guidebook data for sulfuric acid (Guide 137).

Complete the notification process.

Activate the response structure to the level deemed necessary. For an incident of this nature, a full-scale incident management team is not envisioned.

Activation of an Emergency Operations Center or a full Incident Management Team is not deemed necessary. Local responders and the Incident Commander will coordinate all activities related to the response.

Evaluate the plan for securing the source.

Ensure preparation of a Site Safety Plan prior to any entry into the area.

7. Containment, Countermeasures, and Cleanup Strategies

Determine the location and extent of the leak and secure the source.

Determine whether neutralizing the acid solution will be an effective countermeasure. Neutralization of the spill in situ, if possible, should be the priority cleanup option. This would minimize any migration to vegetation/organic soil and potential permafrost degradation in the immediate area.

8. Response Requirements

a. Equipment: Any action to contain, plug or prevent additional release will require the use of appropriate personal protective equipment (PPE).

b. **Personnel:** Personnel responding to this incident (firefighters and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

9. Resource Availability and Resource Procurement

Additional resources, outside of those provided by the first responders will be the responsibility of the Responsible Party. An incident of this size will require evacuation of the immediate area around the accident site, and an isolation perimeter of at least 150 feet is required.

10. Shortfalls

a. **Equipment:** Local firefighting equipment and law enforcement vehicles will be needed as a precautionary measure to control traffic/limit access to the incident; the Fairbanks Hazmat team will most likely not be deployed unless the situation deteriorates further. The cargo handling company, serving as the Responsible Party, will be coordinating with the local responders and the Fairbanks Hazmat Team for technical assistance.

b. **Personnel:** Due to the location of the accident and the localized hazard (i.e., liquid sulfuric acid on the ground), additional emergency response personnel are not deemed necessary.

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 by local responders.

11. Spill Cleanup Timetable

This response should last no more than several days. Cleanup of the immediate area will be required, and any contaminated debris will need to be collected and transported. The preferred option is to neutralize the sulfuric acid, collect the liquid in over-packed drums, and arrange for transport to an approved disposal facility.

12. Disposal Options

Some waste material will be generated during this response; however, 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 U.S. in an EPA, ADEC and DOT-approved manner.

13. Cleanup Termination

The FOSC and SOSC will determine the appropriate time to terminate cleanup operations based on the RP's ability to return the accident site to an acceptable condition.

SCENARIOS: PART THREE – INLAND OIL

A. WORST CASE DISCHARGE

Location: Ambler, 67° 5' North Latitude, 157° 51' West Longitude
Date: Mid May

Situation: A spring storm has produced 2.5 inches of rain and more is forecast with a storm total of up to 4 inches in Ambler, AK.

The foundation of a 9,362 gallon oil tank at the power plant tank farm has failed and the tank has tipped to a 45 degree lean. The foundation failure is attributed to a rotting wood foundation and ground failure due to saturated soils. The valve at the base of the tank has been sheared and the welded seam has partially split at the top of the tank, releasing the entire tank's contents. The tank is leaning out over the sandbag dike surrounding the tank farm and an estimated 4,000 gallons has spilled from the top of the tank outside of the containment dike. Approximately 5,000 gallons has been released to secondary containment. However, 6 inches of standing storm water is also in the containment area (approximately 4,500 gallons water) and the tank collapse has damaged the dike allowing some oil to escape. Additional storm water accumulating in the containment area will continue to displace oil. AVEC estimates that the containment dike is currently capable of containing 9,000 gallons and if storm water accumulates it will displace oil. AVEC is operating a portable pump, capable of 20 gpm, to move water outside of the containment dike.

Terrestrial containment outside of power plant lot has been complicated by the heavy rains and saturated soil. Oil has reached the Kobuk River. Oil is visible on the ice and in water between ice sheets.

Ice on the Kobuk River is in the early stages of break-up: the central portion of the ice sheet is "arched" where the central portion of the ice sheet is lifted while the edges of the sheet remain firmly attached to the banks; ponded runoff will concentrate in channels along the banks while the center of the ice sheet is dry. The increased river flow due to the heavy rain will cause either the ice that is frozen to the banks to break free or the ice sheet to break away from the bank ice. The ice sheet will float on the rising water levels. A few miles downstream from Ambler the ice has begun to break up. Approximately 15 miles downstream, 1 mile upstream/south of the Kobuk Valley National Park boundary, an ice jam has formed and water levels upstream of the jam are rising.

Spill Information: Approximately 2,000 gallons of fuel oil has been released in the partially iced Kobuk River. An additional 3,000-4,000 gallons has escaped the secondary containment at the power plant, but has not reached the river. AVEC personnel have constructed trenches and dams immediately west and south of the tank farm to contain some of the oil. Oil has accumulated at these trenches, as well as in low spots in the surrounding tundra and hillside. Storm water runoff is continuing to displace oil captured at containment trenches. Approximately 4,000 gallons of oil is currently in the tank farm's secondary containment area. The floor of the containment area is not lined or impermeable.

The direction of flow is to east, towards Dahl Avenue and Brooks Street. The tank farm is approximately 700 feet northwest of and 175 feet above the Kobuk River, near its confluence with the Ambler River.

Weather: Rain, storm total up to 10 inches. Temp: 48°F. Wind: East 10 mph. Visibility: 1 mile

Sensitive Areas at Risk:

Area	Description, Reason for Sensitivity	Distance (By air)	Distance (By river)	Management
Ambler River	Chum salmon & sheefish, other fish. Subsistence use area.	0	0	
Kobuk River	The river supports a large number of sheefish, Arctic char, whitefish and chum salmon. Subsistence use area (sheefish, whitefish, chum salmon, grayling, and northern pike berry picking and plant collection, waterfowl). Connected wetlands, important to nesting waterfowl.	0	0	
Traditional subsistence harvest areas on lands surrounding the village.	Subsistence use area. (caribou, berry picking, plant collection)	0	0	Various
Kobuk Valley National Park	National Park	10 miles	11 miles	NPS
Onion Portage Archeological District (National Historic Landmark, National Register of Historic Places)	Cultural and Historic Resources	12 miles	16 miles	National Park Service, NANA Regional Corporation, Ambler and private land holders
Onion Portage Subsistence and Important Habitat Area [1]	Subsistence use area (salmon, sheefish and whitefish; caribou migration corridor)	12 miles	16 miles	National Park Service, NANA Regional Corporation, Ambler and private land holders
Salmon River Sensitive Use Area, National Wild and Scenic River (confluence with Kobuk River; located within Kobuk Valley National Park) [1]	Subsistence use area (salmon and whitefish) Biological resources - salmon, Dolly Varden and whitefish spawning.		62 miles	NPS
Selawik National Wildlife Refuge	National Wildlife Refuge		82 miles	U.S. FWS

Kobuk River Delta Subsistence and Important Habitat Area [1]	Subsistence use area (waterfowl, sheefish, chum salmon, Dolly Varden)		113 miles	Various

Source: [1] Northwest Arctic Borough Coastal District, Coastal Management Plan, 2005

Initial Action Description:

1. Notifications**:** AVEC Power Plant operator notifies ADEC and the National Response Center of the spill and the NRC relays the information to the EPA.

The FOSC (EPA) will ensure the following are notified:

- ADEC Northern Alaska Response Team or 24-Hour ADEC reporting contact, (ADEC also receives notification by RP). ADEC initiates notification of:
  - ADNR
  - ADF&G
  - ADMVA, DHSEM
- DOI
- DOC
- RRT, Regional Response Team
- NOAA SSC, Scientific Support Coordinator
- NRC, National Response Center**
- NSFCC, National Strike Force Coordinating Center**
- NPFC, National Pollution Fund Center**
- Northwest Arctic Borough
- Local Emergency Managers of directly impacted communities
- Federally-recognized tribes in directly impacted communities

Key: ** = Message Notification

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 the 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.
- Request overflights of Kobuk River from NPS or USFWS to assess condition of river ice and extent of visible oil.
- Commence activation/movement of in-house resources (State and Federal).
- Draft Initial POLREP (EPA) and SITREP (ADEC) and distribute.
- Consult with DOI and DOC and the State of Alaska on potential resources at risk.
- Conduct Endangered Species Act consultation with DOI and DOC.
- Activate an FOSC's Historic Properties Specialist.

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

- Gather information from on-scene reports, overflights and any other reliable source to document scene and develop initial response strategy.
- Issue Notice of Federal Interest and Letter of State Interest.
- Notify and consult with communities downstream (Kiana and Noorvik).
- Evaluate current extent of oil in the river, condition of river ice and water levels, current and forecasted weather, potential of ice jam flooding and escape of oil from river corridor, sensitive areas and potential impacts, and other relevant information that might affect response decisions.
- Establish direct communication with the Incident Command Post (ICP), if it is established in Ambler. If no ICP is established, consider using EPA Emergency Response warehouse as the initial Command Post while EPA/ADEC personnel are enroute to the field Command Center in Ambler or Kotzebue.

4. Initial Response Actions

- Secure the source, if possible. Reinforce, if possible, secondary containment at tank farm, manage storm water in the containment area. Remove remaining fuel from the damaged tank.
- Secure spill area and contamination zone. Keep residents out of contaminated areas. Prevent vehicles from crossing contaminated areas.
- Deploy containment measures between the tank and riverbank – dikes, berms and dams and pits, trenches and slots to prevent additional release of oil to river. Extend and reinforcement initial containment trenches and dams constructed immediately south and east of tank farm. Construct additional measures to prevent oil from reaching surrounding tundra.
- Due to the broken ice in the river, containment boom is not recommended. Recovery tactics are also limited due to the conditions.
- Using **Unified Plan, Annex B** Implement some or all of the Incident Command Systems (ICS) principles listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available).
    - Evaluate RP'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- Plan for Kotzebue or Nome.
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
  - Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
  - Coordinate with NWS River Forecast Center, Army Corp of Engineers Cold Region Research and Engineering Laboratory, NPS and USFWS to assess ice jam situation and potential impacts (upstream and downstream) of ice jam flooding and ice jam release.
  - Prepare initial press release with the Unified Command.
  - Complete notification procedures. Include up-channel notification to include the RRT, DRG, DRAT, PIAT, MLCPAC contracting team, 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 *in situ* burning, as alternative to mechanical response.

- Schedule routine overflights of the impacted area. Request USCG support (helicopter and fixed-wing aircraft) in developing an aviation operations plan for the spill to control air traffic in the area.
- Receive recommendations from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program.)
- Consult with natural resource trustees on the protection of sensitive areas and resources and with the Historic Properties Specialist on the protection of historic properties.
- 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

This incident is a Unified Command response, consisting of a FOSC (EPA), SOSC, LOSC and the RP (AVEC).

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.

6. Containment Countermeasures and Cleanup Strategies

- Secure the source, if possible. Remove fuel remaining in damaged tank to other secure tanks.
- Reconstruct and reinforce secondary containment at tank farm. manage storm water in the containment area.
- Manage storm water within in the containment area. Collected storm water will reduce overall capacity of containment area for fuel. To prevent release of an oil/water mixture, storm water removed from containment area will need to be pumped to a alternate containment area or tank.
- Deploy containment measures between the tank and riverbank, to prevent additional release of oil to river. This will utilize a combination of dikes, berms and dams and pits as well as trenches and slots.
- Due to the broken ice in the river, containment boom is not recommended. Recovery tactics are also limited due to the conditions.
- Consider *in situ* burning.
- Organize Shoreline Cleanup Assessment Teams in preparation for shoreline surveys once river is navigable.
- 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 migratory bird deterrent and 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.

- Ice Jam Flooding Considerations: During an ice jam, water levels rise on the upstream of the jam, creating a lakelike effect. Water levels may rise above the riverbanks, allowing oil to escape the river channel area as the area is flooded. When the ice jam releases, water, upstream of the jam, drains at a high velocity. Downstream of the jam water levels should be expected to rise rapidly. Along with the high velocity water, ice blocks and sheets which accumulated at or above the jam are released. These fast-moving, very large blocks of ice can be very destructive.
    - Extreme care should be taken regarding any personnel operating downstream of an ice jam in the event of a release.
    - Sensitive Areas outside of the river channel but which may be threatened due to the ice jam flooding should be identified and plans to protect these areas established.
    - Any protection plans need to consider the potential high velocity force or water ice that occurs during a release when determining measures to protect these areas.

7. Resource Requirements

a. Equipment:

Containment and Recovery Equipment: AVEC maintains some spill response equipment to meet federal planning equipment. This includes sorbent material, a 20 gpm portable pump, hose and an 5 KW generator, all of which would likely be in use prior to the arrival of any additional responders. The equipment required to respond to a spill of this size and the conditions exceeds this supply. Additional equipment will need to be mobilized to the village.

Earthmoving Equipment: According the AVEC Tank Farm Facility Response Plant, the City of Ambler has one backhoe and one loader. It may be available for use at this time. Additional heavy equipment will be limited in size to that available for delivery by aircraft into Ambler.

Vessels, Skimmers, Boom, and other Spill Response Equipment: Due to ice conditions, the river is not navigable. Vessels, skimmers and boom cannot be utilized until ice condition change, at which time the oil is expected to have discharged downstream. If oil continues to seep into the river, from contaminated tundra, these may be utilized when the river is ice-free.

Equipment Resources: AVEC has 51 facilities throughout Alaska and an Anchorage operations base. Some additional equipment can likely be shifted from these locations. Additionally, AVEC maintains a spill response contract with Alaska Chadux Corporation (Chadux). Chadux maintains hubs in Nome and Kotzebue, equipment stored at these locations is listed at https://www.chadux.com/services/response-hubs/. A list of additional equipment for the Northwest Arctic subarea is located in section B of this plan. ADEC also maintains spill response equipment containers in Kotzebue and Nome.

b. Personnel: Initial personnel activation will require several hours to days. The Northwest Arctic subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man participate in other cleanup and response activities.

8. Resource Availability and Resource Procurement

For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (EPA, State of Alaska, Northwest Arctic Borough, AVEC, and Chadux) that would allow the resources of the spill cooperatives 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. 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. 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. If the RP's response is insufficient, EPA may issue a "Notice of Federal Assumption" and take the lead on response activities. 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. Oil Spill Tactics & Technology:
(1) Oil in Broken Ice/Moving Ice: There are no effective means to contain or recovery oil in fast water with broken ice. Once oil reaches a river in this condition, little can be done short of tracking the spill trajectory to identify areas to assess the need for recovery and clean-up once river is ice-free and navigable.
(2) Oily Water vs. Product: Due to the heavy rains, it can be expected that much of the oil recovered will be diluted and may more accurately described as oily water rather than product. This can be harder to recover. It is also harder to track the amount of product recovered.
(3) Oil in Tundra: It is difficult and problematic to recover oil from tundra. Depending on extent of contamination to tundra and type and condition of tundra (frozen vs. thawed) they techniques utilized will vary, but the impact on tundra by recovery tactics is expected to significant, at least in the short-term. The Tundra Tactics Manual addresses the considerations and options available.

b. Equipment:
Any equipment not currently located in Ambler must be transported by aircraft. Weather conditions, availability of aircraft, and the condition of the Ambler gravel runway may limit the availability of equipment.

c. Personnel (logistical/training issues):
(1) Housing – Housing is very limited in Ambler. A local lodge can accommodate 10 visitors. Additional housing space may be available from the school or city, however, these areas may also be required for command or operations centers. Several organizations in Alaska cater "field camp" setups which include housing and feeding facilities. These facilities are available in flyaway form, however the options may be limited due to the season.
Kotzebue is the nearest large community with additional housing. It is the regional hub and seat of the Northwest Arctic Borough. It is 138 miles southeast of Ambler, a flight time of 45 minutes.

(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.

(4) Manpower and Training: Cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

d. Fuel:
Fuel is available from the native corporation. Due to the season, fuel supplies may be limited and additional fuel may be required to be brought in by aircraft.

e. Transportation:
Kotzebue and Nome are the only major commercial airports located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. Equipment must be mobilized by aircraft into Ambler. Weather conditions are also a major factor in hindering air transportation for personnel and equipment. If precipitation is as significant as forecasted, the condition of the runway may be compromised, as well.

f. 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.

g. Minimum Response Times:
Estimates indicate that the RP could have additional response personnel and equipment, from outside of Ambler, on scene within 24-hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the weather.

10. Spill Cleanup Timetable

The spill response will continue until all recoverable oil is collected. Riverbank cleanup will begin as soon the river is ice-free and navigable and would likely be completed by the end of summer.

Clean-up of any lands, outside of the river course but flooded by ice jam flooding would also, likely, be completed by the end of summer. Ongoing monitoring may continue beyond this period. Depending on the extent of oil released into surrounding tundra and muskeg or to wetlands adjacent to the Kobuk River, oil may continue to leach out for an extended period of time, and would require monitoring.

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 oil 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 owners must investigate and identify potential staging areas for contaminated debris and equipment as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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 visible oil (sheen, sludge, etc.) on surface waters (Kobuk River) or petroleum contamination in concentrations in the soil or groundwater exceeding ADEC clean-up levels;
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.

PRINCE WILLIAM SOUND
SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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SCENARIOS: PART ONE - COASTAL OIL

A. WORST CASE

Event Description: A 265,000 DWT tanker experiences a steering failure. Due to heavy weather, the escort vessels were unable to attach a towing line or control the movements of the vessel. The tanker goes aground on the eastern tip of Naked Island. Over the next five days, the vessel breaks apart on the rocks causing a total loss of fuel and cargo into Prince William Sound.

Location: Latitude 60□39.6'N, Longitude 147□18.5'W. Naked Island is 6.5 miles to the west of the Traffic Separation Scheme.

Spill: 92.4 million gallons of Alaska North Slope Crude (ANSC), and approximately over 500,000 gallons of bunker C fuel oil. This is a TAPS trade vessel that loaded cargo at the Alyeska Marine Terminal in Valdez.

Cargo Salvage: Over a five-day period the hull was totally compromised with the entire contents released. Spill response and salvage options were negated by on-scene weather conditions. Lightering barges will be used when conditions permit for removal of residual cargo and fuel. Boom will also be deployed around the vessel when weather conditions permit.

Time of Year: November

On-Scene Weather: NE winds at 40 knots. Sea state 10-15 feet. Air temperature - 38□F.

Discussion: The Captain of the Port, Prince William Sound has set operational restrictions on TAPS trade vessels transiting PWS. Under Federal Regulations 33 CFR 165.1704 vessels transiting in the VTS Special Area are limited to a speed of 12 knots except between Middle Rock and Potato Point where the speed limit shall be 6 knots for laden vessels. A Vessel Escort Response Plan (VERP) developed by the shippers has been accepted by the Coast Guard as meeting the federal regulations for escort vessel selection and informing the master of the performance capabilities as set forth in 33 CFR 168. Under the VERP, tanker speeds have been further defined within the VTS Special Area. Laden vessels are restricted to 6 knots in the Valdez Narrows, 10 knots in the Valdez Arm, 8 knots between Rocky Point and Buoy #9, and 12 knots in the Central Sound. When under ice escort, the vessel speeds are limited to "safe speed" in accordance with Section 7 of the VERP, Revision 1 (2004). Weather restrictions for laden tankers in the Valdez Narrows are winds equal to or greater than 20 knots for 150,000 DWT vessels and 30 knots for all others. Weather restrictions for laden tankers at Hinchinbrook Entrance are winds equal to or greater than 45 knots and/or seas of 15 feet or greater.

The State of Alaska requires that an Escort Vessel and Response Tug escort each laden tanker from the Alyeska Marine Terminal through Hinchinbrook Entrance. The Ship Escort/Response Vessel System (SERVS) also restricts tanker transits if the winds are equal to or greater than 40 knots in Prince William Sound. The maximum transit speed is 10 knots throughout Prince William Sound, except for the Valdez Narrows where the maximum speed is 5 knots. Lower speed limits may be requested by the tanker or escort vessels when ice is detected in the traffic lane.

The Oil Pollution Act of 1990 (OPA 90) requires oil spill response equipment to be pre-positioned throughout Prince William Sound. For additional information refer to 33 CFR Part 155 Subpart E. SERVS

provides this equipment and responds to oil spills involving TAPS trade tankers. Major response equipment including fully equipped response barges and Emergency Response Vessels are located at Cape Hinchinbrook, Naked Island, and Port Valdez. A spill of this magnitude would warrant the activation of the Spills of National Significance (SONS) organization. Refer to the Unified Plan (Annex B, Appendix III) for a description of the SONS organization. Additionally, a spill of this magnitude could also result in a Presidential and gubernatorial disaster declaration.

Initial Action Description:

- Initial call taken by Vessel Traffic Center (VTC), the **Notification of a Spill Incident** form is completed

- Immediate notification of Captain of the Port, Prince William Sound, and the necessary federal/state/local agency notifications are made based on the Emergency Notification List

- State Type 1 Spill Response Team activated. ADEC Type 1 Plan for PWS implemented along with the AIMS Guide.

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

- Begin consultation with NMFS on threatened and endangered species and their critical habitats. **Weather permitting; the following actions will also occur:**

- Immediate call-out of all SERVS response equipment to the site of the discharge. Emergency response vessel with additional response barge obtained with the tug from its mooring station near Naked Island and on scene within an hour.

- Request immediate air support from Air Station Kodiak, AK to conduct overflights pending evacuation of crew. Coast Guard Cutter (CGC) SYCAMORE, out of Cordova, requested to provide initial on-scene platform.

- Incident Command System activated, and Unified Command formed. Command Post established at Valdez Emergency Operations Center (VEOC).

- The Unified Plan and PWS Subarea Contingency Plan are activated. The Geographic Response
  Strategies in the downstream trajectory are reviewed and resource requirements assessed.

- Commence activation of personnel movement.

- COTP closes Traffic Separation Scheme to all vessels and established Safety Zone around vessel.

- Coast Guard declares the incident a Spill of National Significance. ADEC activates the Crisis Management Team.

- USCG drafts POLREP One. ADEC drafts and releases initial SITREP.
    - USCG issues Letter of Federal Interest. ADEC issues Notice of State Interest in a Pollution Incident.

- Issue Letter of Designation.

- Withhold Customs Clearance pending receipt of surety bond, or letter of undertaking.

- State of Alaska alerts response action contractors for possible activation.

Initial On-Scene Investigation/Inspection Evaluation and Recommendations:

- Develop information from overflights, crew reports, spill size, utilize video recording as much as possible 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.

- Determine cargo and fuel capacities.

- Collect charts and log books for evidence.

- Determine cargo salvage options and lightering

  potential. **Initial Response Actions:**

- Ascertain the personnel safety hazards.

- Activate response structure including the Alaska RRT, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC team, National Strike Force, Spill of National Significance Team, Regional Stakeholder Committee (RSC), State of Alaska Type 1 Spill Response Team, and State Crisis Management Team.

- Contact FAA to restrict air space.

- Prepare initial press release.

- Request local government support and input through the RSC.

- Complete dispersant checklist (see Unified Plan, Annex F, Appendix I) and consider use of dispersants through direct consultation with the ARRT.

- Complete in situ burning checklist (see Unified Plan, Annex F, Appendix II) and consult with ARRT for potential use.

- Conduct overflights of spill, prepare spill trajectory and obtain weather forecasts.
    - Review Geographic Response Strategies for the immediate area and downstream spill trajectory areas.

    - Consult with natural resource trustees on the protection of sensitive areas and resources and on potential response options.

    - If threatened or endangered species or their critical habitat areas are present, continue consultation with NMFS representatives in accordance with the Oil Spill Response section of the ESA MOA.

Containment Countermeasures and Cleanup Strategies:

- The Unified Command will coordinate and develop an Incident Action Plan to:

- Conduct initial containment.

- Protect sensitive areas with deflection boom

- Deploy recovery equipment as weather permits.

- Coordinate response and field-related natural resource damage assessment activities with the natural resource trustee Natural Resource Damage Assessment Liaison.

- Establish staging areas.

- Arrange for proper transportation, communications, and vessel and ground support.

- Arrange for proper waste disposal (decanting, segregation, liquid and solid waste) and acquire required permits.

- Initiate migratory bird and sea otter capture and rehabilitation program.

- Deploy Shoreline Cleanup Assessment Teams.

- Continue working with NMFS representatives on appropriate actions to be taken in accordance with the ESA MOA.

Resource Requirements:

- Quick deployment of high volume oil recovery vessels and other mechanical collection equipment is essential to the successful response and spill damage mitigation. Obviously a spill of this size would require all area response equipment in a joint coordinated cleanup effort. SERVS is the primary responder for TAPS trade vessels in Prince William Sound (for complete

lists of their equipment refer to the Prince William Sound Tanker Spill Prevention and Response Plan). Cook Inlet Spill Prevention and Response, Incorporated (CISPRI), Chadux and ACS are the secondary responders in Prince William Sound. All responders have highly organized coordinated management teams knowledgeable in the ICS structure and area familiarity. A communications network is already in place and ready for immediate usage.

- The magnitude of this spill would cause it to transcend beyond the Prince William Sound area. Similar to the 1989 Exxon Valdez oil spill, predominant ocean currents and weather conditions would move the oil towards the southwest, threatening the Kenai Peninsula, Kodiak and surrounding areas. CISPRI resources would more than likely be committed to cleanup and shoreline protection operations in their area of operation (primarily Cook Inlet). A response barge is available at Seldovia for nearshore collection of product. The Captain of the Port, Western Alaska would likewise be heavily involved in overseeing product recovery and cleanup operations in his/her area of operation.

- Personnel: Initial personnel activation may take some time. This area, unlike much of the country, does however have a substantial cadre of Hazwoper-trained individuals to man cleanup vessels and a large contingent of Hazwoper-trained crews to man fishing vessels for spill response. SERVS has spent considerable time in training fishing vessel crews and primary response personnel during Hazwoper training and field deployment exercises.

B. MAXIMUM MOST PROBABLE CASE

The maximum most probable case is determined by the largest recorded oil spill to date in Prince William Sound. The largest to date was the Exxon Valdez. Due to the large size of this spill, the response actions for the maximum most probable and the worst case scenarios will not differ.

C. AVERAGE MOST PROBABLE CASE (2 EXAMPLES)

Introduction: The AMP case(s) for the PWS area likely would be either a “spill due to transfer operations failure” or a “spill due to a fishing vessel sinking, grounding, or other.” Several of the response actions outlined in the worst case scenario would remain the same. Representatives of the USCG and ADEC will likely coordinate cleanup efforts onsite. The need for out-of-region response equipment, the activation of a UC or a JIC, and the deployment of federal and state resources are unlikely in this scenario. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

NOTE: The two scenarios are described below; followed by the “Scope of Activities” (shown once since applies to both – realize that of course these are strictly examples/guides to handling an AMP case; as no two scenarios are the same. Thus, the response should be individualized to the specific incident at hand.

AMP Case Scenario # 1 (Transfer Hose Failure):

Event Description: While transferring product at the Valdez Petroleum Terminal (VPT) to a tank barge, the cargo transfer hose fails, causing a loss of product. The spill is not immediately detected. Cargo shutdown is initiated after the spill is detected.

Location: Latitude 61-07.5□N, Longitude 146-21.0□W. VPT is located on the northeast side of Port Valdez just east of the Valdez City Dock.

Spill: 1050 gallons of diesel fuel. Diesel contained by pre-deployed boom around vessel.

Cargo Salvage: There is no damage to the barge. The transfer hose is removed for inspection by USCG and ADEC investigators. Cargo transfer operations will resume pending satisfactory cleanup and satisfactory testing of newly installed transfer hose.

Time of Year: June

On-Scene Weather: SW winds at 10 knots, sea state 1-2 feet, air temperature 60□F.

Discussion: The Captain of the Port, Prince William Sound requires pre-booming of all vessels transferring at the Valdez Container Terminal and the Alyeska Marine Terminal. The VPT voluntarily pre-booms all vessels transferring at its facility.

OPA 90 requires all facilities to have and maintain or contract for response equipment to respond to their worst case discharge. For more information on this requirement refer to 33 CFR Part 154.

AMP Case Scenario # 2 (Commercial Fishing Vessel Grounding/Sinking):

Event Description: This example is based from an actual case. A 65-foot steel hulled fishing tender returning to Cordova, after taking 150,000 pounds of salmon on board, when it ran aground. Initially the vessel was secured to the shore with lines and was surrounded by containment and sorbent boom. However, when the vessel orientation shifted during recovery operations, small bubbles of oil were occasionally released causing a light sheen which was collected by sorbent material. No sheen was observed outside the boom. Dive surveys were conducted to assess the condition of the vessel, along with the ocean bottom on which the vessel rests. Based on these surveys, the OSRO/Salvage agencies contracted by the RP determined the safest option for removing the fuel was to conduct lightering operations; while the vessel remained at its current location.

Location: Northeast point of Spike Island, right outside Cordova Harbor.

Spill: Approximately 605 gallons of fuel was spilled or unaccounted for. Vessel had approximately 1,500 gallons of diesel fuel, 300 gallons of hydraulic oil and 100 gallons of lube oil on board. Lightering operations were conducted, which removed an estimated 1,295 gallons of fuel / oil product off vessel.

Cargo Salvage: The recovery operations were complicated because the vessel is sitting on rocky ledge and the heavy load of fish on board was causing the vessel to slide toward deeper water. On Sep 1, a large 60inch diameter diesel powered macerating trash pump successfully pumped approximately 75,000 lbs of pink salmon form the hold of the vessel. Another 75,000 lbs of pink salmon were removed on Sep 2nd. The large macerating pump produced a pink slurry that was discharged deep underwater just offshore from the recovery operations. While fish were being removed from the vessel, the fish hold hatch covers were modified to provide additional lift to the vessel. Salvage operations were successful and vessel was refloated and then towed into Cordova.

Time of Year: August – September

On-Scene Weather: Variable sea state, winds, temperatures, and visibility (through-out response)

Vessel Particulars:

Vessel Service: Commercial Fishing Vessel
Length / Weight: 65.5-foot / 104 GRT
Stats: Built - 1970, Self-propelled, Hull-Steel
U.S. Documented: Yes (Valid)

Sensitive Areas at Risk: The area of incident is a favorite local halibut hole. Impacts would be to fishing, sea otters, aesthetics, birds, Ferry System and Vessel traffic in Cordova Harbor area and be of high visibility (media concern). There were no reported impacts to wildlife.

Scope of Activities:

1. Notification

- Initial call taken by USCG Vessel Traffic Center /completion of Spill Incident Form
- Immediate notification of CG duty personnel and COTP-PWS
- CG duty personnel makes the necessary notifications (Federal, State, Local, etc.) based on the Emergency Notification List (See Response Section, Part One)

2. Response Activation

- FOSC/SOSC/RP Representatives establish direct communications
- Ensure that responsible party (RP) is notified and willing / able to respond
- Ensure health and safety of all responders (appropriate PPE worn, etc.)
- USCG duty personnel along with ADEC personnel dispatched to the scene at the first opportunity; to investigate cause, determine what response actions have occurred or are underway
- Establish Safety Zone around spill area, and issue Broadcast Notice to Mariners
- Evaluate slick size, direction, area of coverage, proximity to shore, wildlife impacts, wildlife observed in area, on-scene weather, etc.

- Ascertain if aerial over-flights are warranted
- USCG issue Notice of Federal Interest and ADEC issue Notice of State Interest to RP
- 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.
- If threatened or endangered species or their critical habitats are present, continue consultation with NMFS representatives in accordance with the Oil Spill Response section of the ESA MOA.
- Draft POLREP (USCG) and SITREP (ADEC) and distribute accordingly
- Consider consulting with PIO for press release; if warranted

3. Initiate Response Actions

- Ascertain the personnel safety hazards and evacuate personnel, if required
- Activate the response structure to the level deemed necessary
- Determine proper cleanup being conducted by RP
- Evaluate the capability of RP to carry out an appropriate response given the situation, for securing the source, and preparation of a 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 / SOSC / RP representatives. 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 or isolate the source of spill
- Initiate containment and recovery of spilled material
- Consider double booming of initial containment
- Consider protecting sensitive areas with boom in coordination with resource agencies
- Deployment of recovery equipment supplied by RP or contractor
- Arrange for communications and transportation
- Initiate spill tracking
- Arrange for proper waste disposal and cleanup termination

6. 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 / or contracted out.

7. Shortfalls

- ***Equipment / Personnel***: No shortfall anticipated.
- ***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 OSLTF and procedures are in place to make these funds available (if the RP is not handling the situation adequately, etc.). Also, the USCG may facilitate opening the fund to be used for the issuing of orders for folks like the Strike Team, DRAT, aerial over-flights, or transport of CG personnel to remote areas, etc.
- ***Minimum Response Times***: Response should be initiated immediately, unless due to extreme weather conditions, etc.

SCENARIOS: PART TWO - HAZMAT

A. COASTAL SCENARIO: WORST CASE

Event Description: Due to the lack of vessel traffic transporting Hazardous Materials within the PWS AOR; the scenario describe here relates to a release of Anhydrous Ammonia (NH3) from Silver Bay Seafoods Cannery located at 219 S. Harbor Drive alongside of the Valdez Harbor, Valdez, Alaska.

Location: Latitude: 61° 7' 29.00" N Longitude: 146° 20' 45.53" W

Released Amount: 7,380 lbs (Reportable Quantity (RQ) is 100 lbs)

Released Description: Model assumptions – Used worst case atmospheric conditions with a light wind blowing into town and low humidity. Warm ambient air temperature causes higher internal tank pressures. Tank rupture is caused by a large fork lift puncture through the tank wall. The puncture hole is 8" x 3" and located 3 feet from tank bottom.

Time of Year: May 2, 2014 @ 0930 hrs (Canneries starting to fire up operations)

On-Scene Weather: Winds from the SE at 5 knots. Air Temperature: 55°F. Relative Humidity: 25%. Cloud Cover: 3 tenths.

See Model charts for Toxic / Flammable Threat Zones

Note: Graciously modeled by: Mr. John Engles, ADEC – Using ALOHA Version 5.4.4 – ESRI ArcGIS 10.2 for Desktop)

***Toxic Threat Zone*: Covers a large area of the Valdez Harbor (includes vessels, fueling station, businesses, and residential properties of Valdez).

***Flammable Threat Zone*: Covers a smaller distance but concentrated vapors over fueling dock and a third of the Valdez Harbor, to include local businesses.

Discussion: The primary goal of this response effort is to evaluate the dangers associated with responding to the event with the Valdez Fire Department Level A Hazmat Team, eliminating the potential for impacting Valdez residents, businesses, harbor and sensitive environments.

Initial Action Description:

- Initial call taken by either Coast Guard MSU Valdez personnel, ADEC, or notified via NRC Report received).
- Immediate notification of Captain of the Port, Prince William Sound, and the necessary federal/state/local agency notifications are made based on the Emergency Notification List.
- Valdez Fire Department/Hazmat Team notified

    - State Type 1 Spill Response Team activated (initiated by ADEC)
- Commence activation of personnel movement. Initiate ICS-201.
- Incident Command System activated (Unified Command formed).
- COTP establishes Safety Zone around facility.
- USCG drafts POLREP One. ADEC drafts and releases initial SITREP.
- USCG issues Notice of Federal Interest.
- ADEC issues Notice of State Interest in a Pollution Incident.
- Issue Letter of Designation.
    - Determine if the spill response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC Historic Properties Specialist.

Initial On-Scene Investigation/Inspection Evaluation and Recommendations:

- Develop information from Responsible Party, witnesses, ADEC, etc. on amount released, causal factors, resources at risk, etc.
- Determine evacuation zone and aid in enforcement of.
- Determine total amount of Anhydrous Ammonia stored at facility.
- Collect any equipment/training records for evidence.
    - Determine response and clean-up operations.

Initial Response Actions:

- Ascertain the personnel safety hazards.
    - Consider establishing a safety zone around facility, and moving any personnel, vessels out of the area.
    - Activate response structure including the State of Alaska Type 1 Spill Response Team, the Valdez Fire Department/Hazmat Team, and the Statewide Hazmat Response Team.
- Contact FAA to restrict air space (if necessary)
- Prepare initial press release.
- Request local government support and input through the RSC.

Containment, Countermeasures and Cleanup Strategies:
The Unified Command will coordinate and develop an Incident Action Plan to:

- Conduct initial containment / secure source (if warranted)
- Establish staging areas.
- Arrange for proper transportation, communications, ground support (and vessel support for safety zone patrol)

Resource Requirements:

- The initial response will be made by the Valdez Fire Department/Hazmat Team. Additional support may be needed from the Statewide Hazmat Response Team and may also call on the USCG Pacific Strike Team. A spill response kit designed specifically for Anhydrous Ammonia may be obtained from a local contractor.

FLAMMABLE THREAT ZONE

B. INLAND SCENARIO: MAXIMUM MOST PROBABLE CASE

Event Description: A series of valve failures at a fish processing facility caused a release of anhydrous ammonia.

Location: Within a fish processing facility, Valdez, Alaska.

Spill Size: Approximately 9000 pounds of anhydrous ammonia was released to the atmosphere after spilling to the ground surface.

Spill Description: During a routine maintenance shut-down, a series of valve failures was noticed by contractors, which caused the release of the entire refrigeration system of 9000 pounds of anhydrous ammonia, over a period of about one hour. Most of the spilled ammonia was contained within the facility, until the maintenance crew began to evacuate the buildings. Vapor clouds of the previously pressurized ammonia sank to the floor, and as the vapor warmed, it began to rise and form a plume approximately 500 yards in diameter.

Time of Year: September

On-Scene Weather: Temperatures ranging from the mid 50's during day light hours and near freezing at night. Wind is from the southwest at approximately 3 knots.

Discussion: In this case, the primary objective of the first responders to this incident is to initiate the public notification process to facilitate an orderly evacuation. The evacuation radius for a spill of this size is about mile, which would include a significant portion of the population of Valdez.

Initial Action Description: Construction workers in the vicinity of the leak initially complained of a burning sensation in their eyes and throat, and promptly left the building when they heard alarms sounding throughout the facility. A facility evacuation then proceeded. Notification of the spill was made to the National Response Center, the Alaska Department of Conservation and the Valdez Fire Station. Upon receiving notification, the ADEC State On-Scene Coordinator activates the Incident Command System organization per the provisions of the Unified Plan, Annex B. The operators of the facility assume responsibility of the spill and coordinate evacuation efforts with local authorities. The Valdez Level A Hazmat Team is also activated and prepares to enter the area to secure the source of the release. The ADEC SOSC also places the Statewide Hazmat Response Team on alert for possible activation. Federal and State natural resource trustees were also notified.

Agency ICS Activation: Federal and State involvement in this incident will most likely be to oversee and insure that citizens are evacuated or sheltered in-place where necessary.

Initial On-Scene Investigation / Inspection Evaluation and Recommendations: Due to the magnitude of the spill and the lack of facility capabilities, evacuation of the facility, the city dock (a popular public use facility), and surrounding area is recommended.

Initial Response Actions: Initial response to this incident includes emergency notification and evacuation, plus emergency entry and source control, if possible, by the Valdez Level a Hazmat Team. COTP issues Notice to Mariners to alert the State ferry, fishing vessels, and recreational boaters to the hazard. The fish processing facility is located at the Valdez City Dock and is adjacent to the new Alaska Marine Highway System (AMHS) Ferry Terminal.

Containment Countermeasures and Cleanup Strategies: Due to the transient nature of the ammonia, containment and cleanup operations may not apply. However, the facility may have plans to aid in the dissipation of the gas by venting, displacement via an inert gas, or both.

Resource Requirements: Immediate notification is essential in this incident to avoid exposure of individuals to dangerous concentrations of ammonia. Workers exposed to the gas may require decontamination prior to transport to the hospital. Like most hospitals in Alaska, the Valdez hospital is small and not equipped for dealing with serious hazmat victims. Serious victims of this incident may need to be stabilized and then sent to Anchorage for specialized care. Expedient decontamination will likely take place in the field through the use of ventilation fans to remove vapor residue from the victims.

C. INLAND SCENARIO - AVERAGE MOST PROBABLE CASE

Event Description: A recreational vehicle lost control in a busy intersection, and collided with a truck carrying chlorine cylinders. One of the cylinders was bounced off the truck in the collision, first striking a pedestrian; then, upon hitting the ground, the valve stem on the cylinder cracked, releasing chlorine.

Location: At the intersection of the Glenn and Richardson Highways in Glennallen.

Spill Size: An estimated 80 pounds of chlorine venting into the atmosphere.

Spill Description: As the valve cracked, 80 pounds of gaseous chlorine escaped into the surrounding area. Although the valve vented for approximately 1 minute, the people within 500 yards of the incident were exposed to an IDLH atmosphere. Traffic is backed up on each of the intersections.

Time of Year: July

On-Scene Weather: Winds from the N at 2 knots, warm (71□F) and humid (87%).

Discussion: The highest priority in this incident is to evacuate the remaining population surrounding the incident (or shelter in place), treat victims in the community's hospital. Additional support to aid in evacuation, traffic control and triage may be needed from nearby communities.

Initial Action Description: The Glennallen volunteer fire department responds to the incident with the aid of the one State Trooper, and begins the immediate evacuation of the surrounding area. The fire department does not have Level A personal protective equipment or training to perform an immediate plug or patch of the chlorine leak. The ADEC SOSC activates the Statewide Hazmat Team, and the Valdez Hazmat Team begins to respond from their location. Federal and State natural resource trustees were notified. An FOSC Historic Properties Specialist was also activated.

Agency ICS Activation: Federal and State involvement in this incident will most likely be to oversee and insure that citizens are evacuated or sheltered in-place where necessary.

Initial On-Scene Investigation / Inspection Evaluation and Recommendations: Due to the poisonous/corrosive nature of the gas, and the lack of local response capabilities, evacuation of the surrounding area is recommended.

Initial Response Actions: Initial response to this incident includes emergency notification and evacuation.

Containment Countermeasures and Cleanup Strategies: If the cylinder has not already completely vented itself (which is most probable under this scenario), then it will be moved to an isolated area and left to vent in a controlled situation. The Valdez Hazmat Team with assistance from the local fire department will attempt to control the release at the valve through the use of a Chlorine a Kit. If this is unsuccessful, they will attach a hook to the cylinder and slowly drag (from a safe distance) the cylinder to a remote field or other secure location.

Resource Requirements: Level A Hazmat response gear is required for entry team members attempting to secure the release along with the Chlorine A Kit. If the release cannot be controlled a grappling device will be needed to snag the cylinder. Additional volunteers from the surrounding communities may be called upon to aid in evacuation efforts.

SCENARIOS: PART THREE - INLAND OIL

A. WORST CASE

Event Description: A recent seismic event causes unexpected displacement and settling of the Trans Alaska Pipeline System (TAPS) in the vicinity of MP 753.5, causing the pipe to crack from stress and release crude oil to the surrounding environment.

Location: Trans Alaska Pipeline Mile Post 753.5 in the immediate vicinity of the Tsina and Tiekel Rivers.

Spill Size: Approximately 1,680,000 gallons of Alaska North Slope Crude leaked from the underground pipeline before the spill was discovered and the pipeline shut down.

Spill Description: Upon discovery of the leak, operators of the TAPS shut down pumping operation and isolate the damaged pipeline by shutting valves. Spilled oil surfaces from the underground leak and flows across the local terrain following natural drainages and slopes into the Tsina River. At the time of discovery, approximately 1,000,000 gallons of oil had accumulated on the ground between the pipeline right of way and the banks of the nearby Tsina River. Approximately 20,000 gallons has already entered the waters of the Tiekel River, which flows in an easterly direction approximately 14 miles before entering the Copper River. The remainder of the spill is considered to have soaked into the noticeably oil saturated soils surrounding the damaged pipeline near the origin of the leak.

Time of Year: April

On-Scene Weather: Temperatures ranging from mid 50's during daytime to below freezing at night. Spring breakup conditions exist with melting snow and runoff prevailing during afternoon hours and freezing during late night hours.

Discussion: Given the source, magnitude and location of the spill, this spill would be of national significance. If uncontrolled, much of the spilled oil could enter the Tsina River, which drains into the Tiekel River and finally into the Copper River. Once the spill enters the Copper River, the containment response needs to be accelerated to successfully prevent the spill from contaminating significant portions of the environmentally sensitive Copper River Delta downstream.

Initial Action Description: Upon discovery the operators of the TAPS shut down pipeline pumping operations and activate their company response organization. Notification of the spill is made to the National Response Center, the Alaska Department of Environmental Conservation and the Joint Pipeline Office.

Upon receiving notification the EPA Federal On-Scene Coordinator (FOSC) and the ADEC State On-Scene Coordinator (SOSC) activate a Unified Incident Command System organization as per the provisions of the Unified Plan, Annex B. The operators of TAPS assume responsibility for the spill and establish a command center in Valdez with forward command posts located at Pump Station # 12. Federal and State natural resource trustees were notified. An FOSC Historic Properties Specialist was also activated.

Agency ICS activation: The FOSC requests additional EPA personnel from Seattle, activates the US Coast Guard Pacific Strike Team and activates the EPA Region X, Superfund Technical Assistance and Response Team contractor to provide ICS staff and spill response expertise.

The ADEC SOSC activates a Type 1 Spill Response Team to respond to the incident.

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.

Specific ICS actions:

- Trained personnel from the pipeline monitoring and surveillance section are assigned to the Operations Section, Containment/Cleanup Monitoring Branch and Spill Tracking Branch of the ICS.

- Personnel from JPO engineering and quality assurance sections provide expertise to the Operations Section of the Source Mitigation Branch, which will work with the responsible party personnel to repair the damaged pipeline and restore operations to the pipeline in a safe manner.

- Personnel from the Lands and Right of Way Section augment the Planning Section to provided agency permitting and land management input to cleanup operations.

- Clerical and administrative personnel from the office provide support to the Logistics and Finance/Administration Sections while the JPO's public relations specialists provide media/PIO support to the federal and state unified commanders.

- The Federal Authorized Officer from BLM and the State Pipeline Coordinator from ADNR or their representatives participate as key members of the spill-specific RSC that is formed.

Additional support from federal and state agencies not located within the JPO is requested as needed. US Fish and Wildlife Service personnel assistance is requested by the FOSC through the US DOI representative to the Alaska Regional Response Team. Together with personnel from the Alaska Department of Fish & Game, a Wildlife Response Branch is formed under the Operations Section. Additional personnel from these agencies are requested to staff the response and permitting operations under the Environmental Unit of the Planning Section. The SOSC requests the assistance of the Alaska Air National Guard to provide helicopters for aerial surveillance of the spill area and transportation of personnel and equipment. The State Troopers are alerted and requested to provide site control/security along the highway in the immediate vicinity of the spill.

Initial On-Scene Investigation/Inspection Evaluation and Recommendations: Reconnaissance crews from Pump Station #12 locate the approximate spill site along the pipeline right of way at mile post 753.5. Large quantities of crude oil are observed seeping out of the ground and following the local topography towards the Tsina River. Oil has accumulated in low spots and formed large pools several acres in size. Streamers of oil are also stretching all the way to the nearby river and entering the open channel. A pipeline security helicopter locates an oil slick in the Tiekel River that is still jammed with ice at several locations, approximately six miles downstream of the spill.

Initial Response Actions: Initial response crews from pump stations #10 and #12 mobilize heavy earthmoving equipment to construct containment and interception trenches on land and close to the

banks of the Tisna River. The task force leader requests all available vacuum trucks, additional pumps and skimmers, additional temporary containment equipment and more personnel to form containment and recovery task forces. Upon discovery of oil in the river, the Incident Commander requests the use of *in situ* burning to prevent the oil from spreading and entering the Copper River. The Unified Command is notified of the request, consults with DOI and DOC per the National Contingency Plan, and permission to burn is granted after an evaluation is made of the local weather, proximity of the spill to nearby populations, assessing the risk of fire spreading to surrounding areas, and consultation with local landowners/land managers.

Containment Countermeasures and Cleanup Strategies: As requested, additional earth moving equipment, vacuum trucks, skimmers and pumps, fast tanks, portable storage bladders, decon equipment and portable shelters begin to arrive on-site from pipeline pump stations. A staging area and field command center is located and a site safety plan is developed. After establishing safe zones and proper personnel protection, priority is given to containing the large pools of accumulated oil and intercepting the streams of oil that are flowing towards the river bank. A helicopter deployed "helitorch" is used to ignite the oil slick which is approximately 6 miles downstream of the spill site. A second helicopter carrying company and government observers is deployed to observe the burn and to verify as predicted that the resulting smoke plume dissipates before affecting human inhabited areas.

Field monitors from the Joint Federal and State Incident Command Organization arrive and begin observing the task force's activities. A wildlife survey team, including representatives from USFWS and ADFG, arrive to assess potential impacts to local wildlife. The unified command establishes a joint company/government assessment team to evaluate oil contaminated lands and shorelines and to establish priorities for the protection of non-oiled areas. Staging areas for oiled debris and waste are sited and a waste management plan is prepared.

Resource Requirements: Quick mobilization and deployment of earthmoving equipment is essential to contain spilled oil and prevent further contamination of the Tsina and Tiekel Rivers. This will require the pipeline operator's line-wide inventory of equipment, supplemented by equipment inventories from Alaska Clean Seas and Alyeska's SERVS. Some localized damage to the surrounding lands and associated resources is considered unavoidable to prevent catastrophic spreading. Additional personnel from contractors supporting pipeline operations and spill response cooperatives will be required to supplement initial response teams.

Continued response actions involving recovery of pooled oil on the surface, cleanup of oiled riverbanks, recovery of contaminated soils and restoration of the area is anticipated to take several months, with final remedial actions and monitoring lasting several years. Land managers, environmental regulators and wildlife trustee agencies will need to work in close coordination through the unified command to ensure a successful operation.

B. MAXIMUM MOST PROBABLE CASE

The maximum most probable spill scenario is determined from the largest recorded oil spill to date in the Prince William Sound inland zone.

Event Description, Size, Location & Time of Year: The largest known inland spill for the Prince William Sound subarea occurred on April 20, 1996, at Check Valve 92 which is located approximately 7 miles

south of pump station # 10 at the Trans Alaska Pipeline milepost 593.7. The cause of the spill was determined to be a loose half-inch diameter threaded plug on a 6-inch bypass line. While the initial amount released is unknown, an estimated 30,000 gallons of crude oil have been recovered. The surrounding area was excavated to remove contaminated soil and determine the extent of contamination. The extent of surface and underground contamination appeared to be limited to the general area of the check valve (approximately 130 feet to the south and 119 feet to the north of the valve). The weather at the time of the spill was clear. Temperatures ranged from the 30-55 degrees during the cleanup phase.

Containment Actions: Approximately 100 gallons of crude oil which had accumulated into two metal culvert access pipes were pumped from the pipes. The pipeline daily throughput was reduced from 1.5 million barrels per day to 700,000 barrels per day. Workers excavated the area to determine the source of the leak. On April 23, workers discovered the loose plug on the by-pass line. The threads on the plug were damaged and the threadolet was cracked. Workers installed a new plug as an immediate measure to stop the leak, and the 6-inch by-pass line was subsequently replaced.

Cleanup Actions: A vacuum truck was used to collect the oil which had accumulated in the metal culvert access pipes. Other recovered liquids (oil and water) were re-injected into the pipeline at Pump Station 10. Excavated soils, totaling approximately 3700 cubic yards, were transported to Fairbanks for remediation.

Restoration Action: The open excavations were backfilled and recovery wells were installed to monitor and recover potential product accumulation.

Federal and state agencies combined with the responsible party into a Unified Command structure. The Joint Pipeline Office and ADEC provided the primary response staff for this incident. The FOSC/SOSC sought additional assistance from involved agencies on an as needed basis.

C. AVERAGE MOST PROBABLE CASE

Event Description: While transporting a load of 8,000 gallons of refined diesel fuel from Valdez to Glennallen, the driver of a highway tanker truck loses control of his vehicle on a slippery hill, overturns and ruptures two compartments of the tanker, spilling approximately 4,500 gallons of diesel on the roadway.

Location: Richardson Highway, Copper Center, 600 yards north of the Klutina River crossing bridge.

Time of Year: September

On-Scene Weather: Air temperature 30□F, freezing rains, night time darkness.

Initial Actions Description: The accident is reported by passing motorists to the Alaska State Troopers who proceed to the site and notify ADEC of the spill. The trucking company's dispatcher in Anchorage, Alaska is notified by the State Troopers and in turn notifies company management. Company managers contact the operators of the Trans Alaska Pipeline, with whom they have a contract to haul fuel, and request assistance to contain the spill. The trucking company contacts a local spill response contractor in Anchorage to respond to the incident.

Within 2 hours of the accident, a crew from Pump Station #12 is on scene with company response equipment. Initial response crews block off several highway drainage culverts to contain spilled fuel in the ditches adjacent to the roadway. The remaining 3,500 gallons of fuel in the damaged tanker is pumped off into another tanker truck that was sent to the scene by the responsible party.

Approximately 1,200 gallons of additional oil and water is recovered over the next 12 hours by the commercial cleanup contractor's vacuum truck and by personnel using sorbent materials.

An undetermined amount of oil, estimated to be less than 300 gallons, enters the Klutina River but on the following day, no visible traces of oil are observed in the river during an overflight of the area by company personnel.

Cleanup Strategies: After initial response actions are accomplished, residual soil contamination of approximately 0.25 acres still remains saturated with approximately 3,000 gallons of oil. Under the supervision of ADEC personnel, the cleanup contractor recovers an additional 2,000 gallons from recovery and interception trenches. The area is flushed several times with fresh water in an attempt to remove free oil from surrounding gravels. A long-term remediation plan involving soil sampling, runoff collection and bioremediation is developed and approved by the FOSC/SOSC with input from adjacent landowners.

SOUTHEAST
SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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SCENARIOS: PART ONE – COASTAL OIL

A. WORST CASE SCENARIO

Situation: At 0500 on April 1, during 50 knot wind gusts, the tethering lines between the tugboat *"Bert"* and the fully loaded tank barge (*T/B*) *SZN-101* parted. The Tug *Bert* maneuvered to deploy the emergency towing cable, but because of nighttime darkness and strong winds, was unsuccessful. The outbound Alaska Marine Highway System (AMHS) passenger ferry M/V *Lituya*, enroute to Metlakatla, collided with the inbound tank barge at the vicinity of Kelp Rock Light 1 (LLNR 22045), approximately 3.5nm NW of Metlakatla. The M/V *Lituya* hit the barge broadside, causing the cargo holds to be breached. The current pushed the T/B *SZN-101* into the rocks at Gull Island, where heavy wave action caused the T/B *SZN-101* to split into two and lose its full cargo over the next hour. The winds and waves decreased to a steady 20 knots and 2 feet by 0700. The M/V *Lituya* was superficially damaged and transited back to the AMHS dock in Ketchikan. No persons were injured. The owners made arrangements with the Southeast Alaska Petroleum Resource Organization (SEAPRO), O'Brien's response management company, and Alaska Commercial Divers to mount the response effort. Local fish streams and salmon hatchery areas are pre-boomed to prevent damage and minimize economic disruption. Shoreline Cleanup Assessment Teams discovered multiple cases of oiled wildlife. News channels requested interviews and updates on the large wildlife impact in the area and have arranged interviews with Metlakatla authorities. The Cruise Line Agency of Alaska asked to be kept informed. Volunteers requested to be involved.

Vessel Particulars: 300-foot tank barge; homeport Seattle.
Fuel Capacity: 500, 000 gals (aviation fuel, kerosene (#2 diesel), and unleaded gasoline)
Status: 100% loaded
On-scene Weather: rain; winds, 50 knots, gusts to 65knots decreasing to 15 knots by 0700.
Location: from Kelp Rock Light 1 to Gull Island, 2 to 3.5 miles northwest of Metlakatla.
Date: April 1
Event Time: 0500

Size of Discharge: 500,000 gallons of aviation fuel, kerosene (#2 diesel), and unleaded gasoline

Cargo Salvage: The T/B *SZN-101* considered a total loss. The Tug *Bert* and the M/V *Lituya* suffered superficial damage. The USCG will oversee the marine salvage operations and the investigation.

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 immediate area of the spill that are at risk include sea lions, otters, waterfowl concentrations, and seabird colonies. Metlakatla is approximately two nautical miles southeast of the incident. Any significant spill in this area would severely affect local and regional users of this location, such as subsistence areas. 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 due to their proximity to the spill event. The affects of a spill of this volume would be far reaching. 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.

Response

1. **Notification** (Assume the responsible party has notified the required agencies in accordance with the vessel response plan, which should include notification of the US Coast Guard, required by federal law, and the State of Alaska, which requires the spiller to notify the Alaska Dept. of Environmental Conservation) Upon initial notification, the FOSC and/or the SOSC will, in turn, notify the following:

   ADF&G, Alaska Dept. of Fish and Game
   ADNR, Alaska Dept. of Natural Resources
   ADMVA, Alaska Dept. of Military &Veteran Affairs
   NRC, National Response Center
   NOAA SSC, Scientific Support Coordinator
   NSFCC, National Strike Force Coordinating Center
   NPFC, National Pollution Fund Center
   USDOI, US Dept. of the Interior
   Local Emergency Managers and tribal leaders of any impacted/threatened communities
   City of Metlakatla
   CGD17 OPCEN, to activate support resources, including the following:
      District (dr), District Office
      DRG, District Response Group
      DRAT, District Response Advisory Team
      PIAT, Public Information Assist Team
      RRT, Regional Response Team

2. **Initial On-Scene Investigation, Inspection, Evaluation & Recommendations**

- Dispatch representatives to the scene at the first opportunity.
- Gather information from over-flights, crew reports, video recordings and any other reliable source to document the situation and develop initial response strategy.
- Have investigation team immediately conduct drug testing of the vessel's crew and interviews to determine the cause of the incident.
- Ensure that the Responsible Party (RP) is notified and responding appropriately.
- Establish direct communications between the FOSC, the SOSC, and the Responsible Party (RP) representatives.
- Determine cargo and fuel amounts. 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, as appropriate.
- Evaluate/determine slick size and direction of travel; on-scene weather; area of coverage and shore impacts; imminent threats to wildlife and sensitive habitats, and other relevant information that might affect response decisions.
- Request USCG cutter support to provide initial on-scene platform and/or other available vessel platforms.
- Establish direct communication between on-scene responders and the Unified Command Post.

3. Initial Response Actions

- Secure the source, if possible.
- Commence notifications of all pertinent parties per the Response Section of this plan, providing initial situation assessment: incident location, quantity spilled, threat to wildlife and sensitive habitats, status of source control, etc.
- Establish a Unified Command in the Juneau Federal Building and forward operating bases and staging areas in Ketchikan.
- Establish an Incident Management Team under the Unified Command.
- Develop containment/booming plan for implementation as weather permits.
- Complete notifications and include other resources as required. Ensure up-channel notification to include the RRT, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.
- Consult with affected natural resource trustees on resources at risk, native land use, and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.
- Establish Joint Information Center in Ketchikan or Juneau, as determined by the Unified Command.
- Activate a Unified Command website for the incident.
- Prepare a Unified Command initial press release.
- Prioritize response activities according to the joint goals and objectives developed by the Unified Command.
- 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 a Site Safety Plan.
- Determine if any fisheries or subsistence use areas will be affected and take appropriate action, including closure notices and public warnings.
- Prioritize areas for exclusion booming, protective booming, and shoreline cleanup. Review the *Geographic Response Strategies Section* of this plan to identify locations for the area.
- Review seafood processor protection plans and implement specific plans to protect the water intakes from any spilled oil.
- Activate an FOSC's Historic Properties Specialist.
- USCG drafts first POLREP. ADEC drafts and releases initial SITREP.
- Keep the Metlakatla community and local and tribal stakeholders informed.
- Convene a Regional Stakeholder Committee to provide input to the Unified Command.
- Schedule routine over-flights of the spill response area. Request USCG support in developing an aviation operations plan to control air traffic in the area.
- In consultation with trustee agencies, determine requirements for wildlife protection, hazing, collection, and rehabilitation.
- Evaluate the RP's capability to carry out an appropriate response.
- Use local knowledge, NOAA SSC, and other NOAA resources, as necessary, to predict spill trajectory and potential impacts.
- Determine feasibility of removal actions based upon the following questions:

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

4. 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 escalation of an incident to a SONS is intended to make available more resources and personnel for response.
- A Liaison Officer will be assigned to act as a liaison with any landowners, leaseholders or 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.

5. Containment Countermeasures and Cleanup Strategies

- Secure the source, if possible.
- Boom the tank barge at the earliest opportunity, pending favorable weather.
- 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 the 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 and/or sensitive habitats may be affected. The lead trustee will then coordinate the NRDA separate from the response and with funds provided by the RP or the National Pollution Fund Center.
- Request NOAA Scientific Support Coordinator to provide spill tracking and trajectory modeling to determine present location and path of spill.
- Request National Weather Service to provide spot forecasting weather information.

6. Resource Requirements

- Quick deployment of high volume oil recovery vessels and other mechanical collection equipment may be needed to mitigate spill damage. This spill may require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. (See the *Resources Section*.) Because of the high evaporative rate of the cargo, it is recognized that equipment from outside the area may not arrive in a timely manner to have a significant effect on the cleanup.
- Skimming systems may be requested from the major spill cooperatives in Alaska and deployed to the spill area. The equipment and vessels should arrive on scene with all equipment prepared for immediate deployment. The major spill cooperatives in the state are listed in the *Resources*

Section, as well. These companies have a variety of bladders and smaller barges for near-shore deployment, as well as offshore storage barges and portable tanks for shore-side temporary storage.

- Initial personnel activation will require several hours to days to fully staff required positions, depending on specialty assignments and travel logistics.
- Volunteers will be managed per Annex V of the **Unified Plan** and Part Five of the *Resources Section* of this plan.

7. Resource Availability and Resource Procurement

- For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (USCG, State of Alaska, the RP, and SEAPRO) that would allow the resources of the spill cooperatives 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.
- Procuring the resources identified for this spill response is the RP's responsibility. A spill of this magnitude may exceed $1 million during the initial stages of the response. 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, and the ADEC State On-Scene Coordinator can activate the Oil and Hazardous Substance Release Prevention and Response Fund (the Response Fund) to offset response costs incurred by State agencies. The State and the federal government will initiate cost recovery from the Responsible Party.

8. Disposal Options

- Debris disposal is the responsibility of the RP. The volume of oil-contaminated debris will exceed the disposal capabilities of the region, unless on-site disposal methods are approved by the appropriate agencies. The RP must present a waste management plan to appropriate agencies along with necessary permits. Disposal options for oil-contaminated 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.
- Under the conditions outlined in this scenario, a very large volume of recovered product and oil-contaminated equipment and debris will be generated. The remoteness of the region will complicate disposal and elevate the costs of handling and transportation. The limited availability of shipping and storage facilities makes 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 effort. Facility/vessel owners must investigate and identify potential staging areas for contaminated debris and equipment, as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation and disposal of accumulated waste.
- Areas designated for cleaning contaminated equipment must be able to handle the contaminated runoff.

9. Cleanup Termination

Termination of cleanup should be a joint decision by the Unified Command based upon one or more of 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 potential contribution to minimizing a threat to the public health or welfare or the environment; and
- All efforts required to repair any damage resulting from removal actions have been completed.

Spill Cleanup Timetable: Estimates indicate that the RP could have response personnel and equipment on-scene within four hours of the incident report, pending favorable weather. The response to this spill will depend heavily upon the sea state and weather conditions in the incident area, a major factor for operations due to personnel safety and equipment capabilities.. The on-water spill response will continue until all recoverable oil is collected. Shoreline cleanup will begin as soon as possible after beaches are oiled and continue until the Unified Command determines that shoreline operations should cease. A major factor determining the timeline of a diesel oil spill response is the generally rapid evaporation and degradation of the material; but the high toxicities associated with diesel may manifest in high wildlife rehabilitation needs, which could take months to resolve.

Shortfalls: Weather, tides, and constrictions inherent in nighttime operations can complicate the response for this scenario. Other factors for consideration are the remote location and the lack of supporting infrastructure in the immediate area, as well as the following items:

- 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 from 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.
- Wildlife Rehabilitation Facilities: Rehabilitation facilities with an adequate number of trained, experienced workers and large enough to handle more than a few birds/animals are limited in Southeast Alaska. If a temporary facility cannot be erected and experienced staff brought in, the transportation of injured wildlife out of the area would need to be addressed. The public will often judge an oil spill response on how well the wildlife issues are handled, thus, this is an area that deserves more scrutiny.
- Personnel (logistical/training issues):
  - Housing – Local hotels and on-water vessels and barges will be required to sustain the response. It may be possible to arrange agreements with the City of Metlakatla, but it is likely that most of the staging will be out of Ketchikan. 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. The Unified Command should consider activating the Alaska Regional Response Team to support housing issues. The State ferry M/V *Kennicott* should be considered as a forward command post and housing facility for responders; the M/V *Kennicott* was specially designed to support a major spill response effort and detailed information on the vessel is available in Annex E of the **Unified Plan**.

- 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 local sources.
- Fuel – Several fuel facilities are located in the Ketchikan area and could serve to supply the numerous vessels operating in the area.
- Transportation – Ketchikan is the only major commercial airport located in the immediate vicinity of the spill area and would serve as the primary logistics supply point. In most cases, equipment must be transported over water or sling-loaded via helicopter to the incident location. Weather conditions could hinder both air and water transportation for personnel and equipment.
- Manpower and Training – Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Initially there will be a limited number of trained personnel in the area available to respond immediately. Volunteers will not be solicited, and individuals desiring to help will be directed to the RP's coordinator for hiring emergency response workers.
- Funding – Availability and access to proper funding should pose no problems 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. 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.

B. MAXIMUM MOST PROBABLE CASE SCENARIO

The maximum most probable case chosen for the Southeast Subarea is the scenario of a single-bottomed ore carrier that goes aground or otherwise creates a pollution event through the release of persistent oil (Bunker C). Many of the response actions outlined in the worst case scenario will not differ significantly for the maximum most probable scenario. A compounding issue in this scenario is the persistent nature of Bunker C oil as compared to the diesel fuel spilled in the worst case scenario. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

Situation: On November 4 at 1100, the ore ship M/V *Latarsha Oldendorff* finished loading three cargo holds of ore and was outbound with a marine pilot onboard and two tug escorts. As the vessel approached the narrow mouth of Hawk Inlet, the port-aft attending tug lost power. Sustained 35-knot winds quickly swung the stern of the vessel into shallow water where the hull struck rocks, ripping gashes in two fuel tanks containing Bunker C oil. The USCG Sector Command Center received notification via VHF-FM radio from the master. The master stated the vessel was not in danger of sinking and was not taking on water in any of the manned spaces.

Vessel Particulars: 585-ft German-flag freight ship M/V *Latarsha Oldendorff*; 20-person crew
Fuel Capacity: 204,921 gallons (bulk carrier); six fuel tanks along side of vessel, single hull (25, 000 gal per tank)
Status: Loaded
On-Scene Weather: winds, 35 knots sustained with gusts to 45 knots; temperature, 41 degrees with precipitation; seas from SE at 6 to 8 feet.
Location: entrance to Hawk Inlet, west Admiralty Island, 57’04 N 135’24 W.
Date: November 4
Event Time: 1100

Size of the Discharge: An estimated 50,000 gallons of Bunker C (approximately two of the tanks were compromised).

Cargo Salvage: The vessel owner planned to initiate temporary repair of the damaged vessel in a place of refuge and then proceed to a major shipyard for permanent repairs. Discharge of the ore cargo would need to be addressed; the vessel cannot be laden when going into dry dock for repairs. USCG Sector Juneau would review and approve in coordination with ADEC a place-of-refuge location for the vessel and salvage, temporary repair, and transit plans.

Response: The Hawk Inlet Facility has skiffs and 1000 feet of containment boom available; however, due to high winds, they would be hampered from mounting an initial response. The oil spill response organization, SEAPRO, would launch the M/V *Neka Bay* and an oil response barge upon notification; estimated arrival time 8 hours from downtown Juneau. Other equipment could be transiting or otherwise available in the area (consult the *Resources Section*). Response efforts should include the following:

- Make notifications to all trustees and tribal concerns per the Response Section of this plan; Shee’Atika, the Sitka Native Corporation, has land use/ownership. Provide a concise initial situation assessment and specific spill information, including exact location, quantity spilled, potential threat, status of source control, etc.

- Establish contact with the responsible party (the RP's "qualified individual"), as soon as possible, and ensure they are responding, preferably with an official on scene.
- Establish Safety Zones.
- Deploy USCG helicopter and 110-foot patrol boat resources for initial assessments. Evaluate slick size, direction, area of coverage, proximity to shore, weather, wildlife observed in area, and possible pollution impacts.
- Commence activation/movement of in-house resources (State and federal). Draft POLREP (USCG) and SITREP (ADEC) and distribute. Dispatch State and federal representatives to the scene at the first opportunity and establish direct communications with the FOSC, the SOSC, and the RP Representative..
- Have NOAA provide trajectories for the spill.
- Have NWS provide spot forecasts and detailed weather information.
- Form a Unified Command, including immediate activation of a JIC.
- Review the *Geographic Response Strategies* (GRS) *Section* in this plan to determine if any GRS near the incident should be employed to protect sensitive areas at risk.
- Review the Potential Places of Refuge Section in this plan when determining an appropriate location where the vessel can seek shelter to effect repairs.
- Consult with affected natural resource trustees on resources at risk, native land use, and proposed response actions that may affect trust resources, including consultation on wildlife response and threatened and endangered species and their critical habitats.
- Activate an FOSC's Historic Properties Specialist.
- Manage volunteer requests per Annex V of the **Unified Plan** and Part Five of the *Resources Section* of this plan.

Sensitive Areas at Risk: Waterfowl and harbor seals are some of the resources present in the area during early November. Specific information on resources at risk can be found in the Sensitive Areas Section of this plan and in consultation with the resource trustees. The exposed shoreline consists of rocky and gravel beaches. The spill impact of 50,000 gallons of Bunker C is significant. The effects of a spill of this volume are far reaching and would affect a large area. An extensive, coordinated effort between trustee agencies will be necessary to develop a comprehensive approach to environmental impact abatement. The *Sensitive Areas Section* provides a framework for accomplishing this task.

Shortfalls: Weather, tides, and constrictions inherent in nighttime operations can complicate the response for this scenario. Other factors for consideration are the remote location and the lack of supporting infrastructure in the immediate area.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case for the Southeast Subarea likely would be a fishing vessel that either sinks, goes aground, or otherwise creates a pollution event through the release of its diesel fuel. Many of the response actions outlined in the worst case scenario would remain the same. Representatives of the USCG and ADEC will likely coordinate cleanup efforts onsite. The need for out-of-region response equipment, the activation of a Unified Command or a Joint Information Center, and the deployment of federal and state resources are unlikely in this scenario. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

Situation: After the fourth Sac Roe herring opener in Sitka Sound, the owner/operator of the 1945 wooden seiner *F/V Little Flower* fell asleep at the helm due to fatigue. At 2300 on March 22, the vessel ran aground on rocks surrounding Kasiana Island during an outgoing tide, rolling on its side, and discharging fuel from the vents. Planks began to stress and the vessel flooded; it could not be refloated. With an incoming tide, the *F/V Little Flower* became a hazard to navigation. A Good Samaritan vessel assisted *F/V Little Flower* in plugging the fuel vents and deploying the initial containment boom. A heavy sheen is observed in the area. The owner contacted a contractor to dive and mitigate the damage; the divers found a two-foot gash in the bow. After the vessel is refloated, temporary repairs were made. Uncertain whether the cargo of herring was contaminated, thus requiring disposal, ADEC personnel arrived to oversee the testing and permitting process involved in oily fish waste disposal. The RP made arrangements for the F/V *Little Flower* to complete repairs in a shipyard.

Vessel Particulars: 50-foot wooden seiner; 1945; homeport Seattle; three crew.
Fuel Capacity: 3000 gallons (diesel); small quantities of lube oil.
Status: Two-thirds loaded; 2000 gallons diesel onboard.
On-Scene Weather: winds, 20 mph; temperature, 46 degrees; steady rain.
Location: Sitka Sound
Date: March 22; Sac Roe herring fishery opener.
Event Time: 2300
Event Location: Kasiana Island; 57’04 N 135’24 W
Response: TCI Environmental from Sitka completes initial booming within 2 hours of notification. Cook Construction from Gustavus provides diving and refloating expertise.

Sensitive Areas at Risk: Waterfowl, herring, whales, harbor seals, otters, shellfish, and salmon are some of the resources either present in the area during late March or potentially affected through habitat loss. Specific information on resources at risk will be found in the *Sensitive Areas Section* of this plan and in consultation with the resource trustees. The exposed shoreline is rocky. Review of the *Geographic Response Strategies* (GRS) *Section* in this plan will allow determination if any GRS near the incident should be employed to protect sensitive areas at risk.

Shortfalls: Weather, tides, and constrictions inherent in nighttime operations can complicate the response for this scenario.

SCENARIOS: PART TWO – HAZMAT

MAXIMUM MOST PROBABLE HAZMAT SCENARIO

The maximum most probable case for the Southeast Subarea would likely be a seafood processing plant that is either abandoned, sustains an accidental catastrophic release, or otherwise creates a catastrophic release of anhydrous ammonia. Many of the response actions outlined in the worst case scenario would remain the same, although the need for out-of-region response equipment, the activation of a full incident management team or a Joint Information Center, and the deployment of federal and State resources would not be at the same scale. Notifications would remain the same to keep all concerned stakeholders and resource agencies informed of the incident.

Situation: *(This scenario is based on an actual event from August 20, 2009, when the flume supplying water to the City of Pelican AK, failed due to heavy rains throughout the previous days. At the time of the flume collapse a construction project to upgrade Pelican's hydroelectric plant was underway. Part of the project included installation of a temporary waterline to provide Pelican with drinking water. This line is now being used to supply all water to Pelican, including both the town and the Pelican Seafood's fish processing plant.)*

A temporary water line has insufficient capacity to concurrently meet the drinking water needs of Pelican residents and cooling water requirements for the fish plant. The water line is used to fill Pelican's water tank at night, and during the day the water flow is diverted to the fish plant to cool the compressors in the refrigeration system. The refrigeration system uses anhydrous ammonia as a refrigerant; there is an estimated 20,000 to 30,000 pounds of anhydrous ammonia in the refrigeration system at the fish plant. Heavy rains could cause a failure of the flume, resulting in a disruption to the water supply that cools the fish plant's compressors, essentially shutting down the refrigeration system. Without sufficient cooling water there is an increase of pressure in the system. Most modern systems could withstand these pressures; however, the system in the fish plant is quite old. Personnel taking care of the system have previously noted minor leaks, and a continued increase in pressure would add additional stress to the system piping. The cooling coils and refrigerant lines for the system are located above the freezers. The wood structure, according to personnel on scene, is frozen. There is concern in the community that should the wood structure thaw, the roof of the fish plant could collapse and break the system piping, resulting in a catastrophic release of anhydrous ammonia.

Facility Description: fish processing plant
Status: Non-operational
Maximum Capacity: 30,000 lbs of anhydrous ammonia
On-Scene Weather: 56 degrees, winds E at 35 knots, rain
Location: Pelican, AK, 57 57.6N 136 13.8W
Date: August 20

Sensitive Areas at Risk: Includes local citizens, waterfowl concentrations during migration periods, and local wildlife in the area of the plant or a resultant plume.

Response

1. **Notification** (Assume the responsible party has notified the required agencies in accordance with the vessel response plan, which should include notification of the US Coast Guard, required by federal law, and the State of Alaska, which requires the spiller to notify the Alaska Dept. of Environmental Conservation) Inform local citizens of the situation at the facility and what actions are recommended if the tanks do release. In the event of a release, ensure immediate notification of ADEC via the Spill Report Hotline. Captain of the Port, Southeast Alaska, would also receive notification simultaneously from the National Response Center. Follow-on federal/state/local agency notifications will be made based on the Emergency Notification List in the Response Section of this plan.

2. **Initial Response Actions**

- Determine and confirm personnel safety hazards in the immediate area and determine downwind exposure from a potential ammonia release.
- Ensure public health and safety by developing plans for evacuating populace at risk or by developing shelter in place plans.
- Identify response structure to include local responders and the Statewide Hazmat Response Team.
- Have the system inspected to check for leaks and to locate any potential weak points and to assess its overall condition.
- Hire specialist to inspect the facility to ensure that as the ice thaws the building will remain structurally sound.
- ADEC consults with the Statewide Hazmat Response Team of the situation and alerts them on the need for possible deployment.
- ADEC activates a term contract with Aware Consulting for technical advice on preventing a catastrophic release and for developing plans to deal with any ammonia release and post-incident investigation.
- Conduct controlled releases to ensure that the system does not get over-pressurized.
- Inform and coordinate with FAA to restrict airspace, if a release occurs.
- Due to the threat to public health and safety, the initial Incident Commander or a representative from the City of Pelican will serve as a member of the Unified Command until the threat is abated.
- Once a plan has been established, commence mobilization of response personnel.
- Incident Command System activated, and Unified Command formed.
- COTP directs the establishment of a Safety Zone around the facility.
- USCG drafts first POLREP. ADEC drafts and releases initial SITREP.
- Prepare initial press release.
- USCG issues Letter of Federal Interest. ADEC issues Notice of State Interest in a Pollution Incident.
- Issue Letter of Designation.

- State of Alaska alerts additional response action contractors for possible activation, as well as other members of the Statewide Hazmat Response Team for additional support, if required.
- If a Hazmat release occurs, determine whether the response is categorically excluded under the national programmatic agreement to protect historic properties, and if not, activate an FOSC Historic Properties Specialist.

3. Initial On-Scene Investigation/Inspection, Evaluation, and Recommendations (Should a release occur).

- Develop information from facility worker reports, including release size; utilize video recording as much as possible to document scene and develop initial response strategy.
- Verify overall system capacities for anhydrous ammonia and determine potential for additional releases, in consultation with the facility manager, refrigeration specialist, and Aware Consulting technical representative.
- Collect charts and refrigeration system maintenance and resupply files for evidence.

4. Containment Countermeasures and Cleanup Strategies

The Unified Command will coordinate and develop an Incident Action Plan to accomplish the following:

- Plan for initial containment should a release occur,
- Develop preventive measures to reduce the risk of a catastrophic release.
- Establish the initial on-scene command post and staging area.
- Support local responders and provide updated information to federal, State, local, and tribal entities.

5. Resource Requirements

Due to the short nature of the release, the Statewide Hazmat Response Team will likely be stood down after determination that the ammonia release has stopped. The team will remain on standby pending any further releases that may be prolonged in nature. The Aware Consulting staff person will be mobilized, along with several DEC responders and the Coast Guard to provide additional support to the local responders.

6. Response Requirements

- **Equipment:** Any action to contain, plug, or prevent an additional release will require the use of appropriate personal protective equipment (PPE).
- **Personnel:** Personnel responding to this incident (local firefighters and other responders) will be required to be trained to at least the first responder awareness level. Those entering the scene to secure the leak source and initiate cleanup and containment will require training to the technician level.

7. Cleanup Termination

The FOSC and SOSC will determine the appropriate time to terminate operations based on the RP's ability and assurances that further releases will not occur. The investigation into the cause of the release will continue after response termination.

Spill Cleanup Timetable: This response would likely last no more than several days. Cleanup of the immediate area will be required and may simply consist of facility ventilation. The RP should direct a complete inventory of the ammonia refrigeration system and determine the potential for any potential releases. Meanwhile, ADEC directs the ammonia specialists, Aware Consulting, to assist with the inventory and to conduct a thorough inspection of the system to determine the cause of any release and potential for future ammonia releases.

Shortfalls:

- **Equipment:** The City of Pelican does not maintain a Level A entry capable Hazmat Team, and Level A Personal Protective Equipment is not available in Pelican.
- **Personnel:** Due to the location of the accident, and assuming evacuation and proper shelter in place actions have occurred, additional emergency response personnel are not deemed necessary, unless the release extends over a prolonged period of time.
- **Funding:** Funding of response and cleanup actions will be the responsibility of the Responsible Party.
- **Minimum Response Times:** Response should be initiated immediately. Based on the location of the incident, the RP and local fire chief will initially respond to the situation if a release occurs. The FOSC, SOSC, and Aware Consulting representative are expected to arrive at the scene by early afternoon.

WESTERN ALASKA SUBAREA CONTINGENCY PLAN

SCENARIOS
SECTION

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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 ADEC Spills Database and the NOAA Scientific Support Coordinator 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.

Deliveries of noncrude oils are made to the villages in this area primarily by barges operating from Dutch Harbor or the Cook Inlet subarea. Deliveries are ice dependent and do not occur as ice forms. Small 300,000 gallon barges operate during the ice-free season to supply interior villages and some villages along the outer coast.

C. VULNERABILITY ANALYSIS

The Western Alaska subarea is characterized by the two major river systems (Yukon and Kuskokwim) that traverse through the subarea. Residents along the river depend on these waterways for commercial and subsistence fishing, as well as a means of transportation. The coastal communities likewise rely on the Bering Sea for commercial and subsistence fishing. The area is predominantly wetland tundra in the Yukon-Kuskokwim delta region, transitioning to rolling hills and several mountain ranges further inland.

There are a total of 64 communities in the region, with the majority also identified as federally-recognized Native tribes. Many human activities in the Western Alaska subarea revolve around the subsistence, recreational, and commercial uses of fish and wildlife. Commercial fishing, trapping, reindeer herding, guided hunting and fishing trips, fur tanning and sewing, and seafood processing are important segments of the local economy. Service-related businesses and government provide the primary sources of wage employment in the region.

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.

An overview of oil fate analysis can be found in the Background Section (Section E, Part 3, D, Oil Fate and General Risk Assessment) of this plan.

D. SEASONAL CONSIDERATIONS

See Part Three of the Background Section of this plan for information on wind, ice and current conditions and spill trajectory modeling.

SCENARIOS: PART ONE - COASTAL OIL

A. WORST CASE SCENARIO

Size of the Discharge: 250,000 gallons (of the 300,000 total capacity) of a barge's cargo.

Event Description: The fuel barge planning to refuel the Alaska Village Electric Cooperative facility site in Hooper Bay strikes a partially submerged object en route to the marine header. The object struck is unknown. The vessel grounds on the struck object and immediately begins discharging product into the Bering Sea. Five of the eight tanks are compromised and discharging product.

Location: Approximate position- Latitude 61° 30'N; Longitude 166° 10'W.

Spill: There is a steady release of fuel oil (6,000 gals/day) for two days, then a slower release of 2,500 gals/day for the next several days. The vessel was carrying a total of 175,000 gallons of #2 Diesel, 100,000 gallons of gasoline and 25,000 gallons of Jet Fuel.

Cargo Salvage: The ship is determined to be salvageable; lightering is weather dependent.

Date: April 18

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

The shoreline geomorphology in the immediate vicinity of the spill is predominantly wetland tundra in the Yukon-Kuskokwim delta region. 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. Several downstream communities 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 ensure the following are notified:
   - ** ADEC Central Alaska Response Team or 24-hour ADEC reporting contact
   - * ADNR
   - * ADF&G
   - * ADMVA, DHSEM
   - ** 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
   - ** DOI
   - ** NRC, National Response Center
   - *** NOAA SSC, Scientific Support Coordinator
   - ** NSFCC, National Strike Force Coordinating Center
   - ** NPFC, National Pollution Fund Center
   - *** Local Emergency Managers of directly impacted communities
   - *** Federally-recognized tribes in impacted communities

   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 the 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.
   - Request immediate helicopter support through D17 OPCEN to conduct overflights of vessel. Also, helicopter support may be required if vessel must be evacuated. Request USCG cutter support 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.
   - 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.

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.
- Determine cargo and fuel capacities. Contact last port if immediate cargo amounts are unknown.
- Collect charts and log books for evidence.
- Determine fuel 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 Incident Command Post (ICP), if it is established in the field. If no ICP is established, consider using USCG Sector Anchorage conference room as the initial Command Post while USCG/ADEC personnel are enroute to the field Command Center.

4. Initial Response Actions

- Secure the source, if possible.
- Take actions to stabilize the vessel. Notify USCG Marine Safety Center of vessel information and situation. Request stability information.
- Deploy containment boom and/or plan and prioritize shoreline protection and cleanup areas. Utilize established Geographic Response Strategies (GRS), when possible.
- Evacuate any injured personnel or unnecessary crew members.
- Using **Unified Plan, Annex B** Implement some or all of the Incident Command Systems (ICS) principles listed below:
    - Develop a Unified Command (UC) that includes RPOSC, SOSC, FOSC and LOSC (if available).
    - Evaluate RP'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- Plan for the nearest major community that can support an Inciden Command Post..
    - Establish a Joint Information Center (JIC). Ensure joint website and/or appropriate local stakeholder communication plan is used to maximize information sharing.
- 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, DRG, DRAT, PIAT, MLCPAC contracting team, NPFC, and NSFCC.
- 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.
- Determine any fisheries impacts, and take appropriate action.
- Consider alternatives to mechanical response: dispersant application, *in situ* burning, or destruction of entire vessel and cargo by burning.
- Schedule routine overflights of the impacted area. Request USCG support in developing an aviation operations plan for the spill to control air traffic in the area.
- 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 recommendation from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program).
- 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

A spill of this magnitude would not normally 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 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. The Regional Stakeholder Committee will be formed to serve as the official stakeholder and community representative voice 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 National Pollution Fund Center (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.

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 will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. A complete list of available equipment for the Western Alaska subarea is located in the Resources Section of this plan. Equipment stored readily available in Bethel by Alaska Chadux Corporation (ACC) is located at http://www.chadux.com/bethel.html

b. Vessels, Skimmers, Boom, and other Spill Response Equipment:

(1) 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 include, but are not limited to the following:

Skimmers

- Lamor 30
- Lamor 12
- Manta Ray
- Skimpak 1800
- Desmi Minimax
- Stellar vac unit
- Rovac

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 also in local inventories.

Vessels of Opportunity: Both CISPRI and SERVS have a fleet of pre-identified and trained large vessels of opportunity. 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 are located in 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. Logistical arrangements and support will be necessary to manage any large scale deployments of ocean-going vessels to the incident area in support of cleanup operations.

Personnel: Initial personnel activation will require several hours to days. The Western Alaska subarea, like much of the state, does not have a substantial cadre of HAZWOPER-trained individuals to man cleanup vessels and participate in other cleanup and response activities.

8. Resource Availability and Resource Procurement

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 the spill cooperatives 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 likely exceed $1 million each day during the initial stages of the response. 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 from 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 issues):

(1) Housing – Local hotels, seafood processing facility mancamps, on-water vessels and barges will be required to sustain the 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 of Alaska.

(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 in the subarea. These facilities would be required to supply the numerous vessels operating in the area. Fuel may become a concern given the long term response anticipated for a spill of this magnitude.

(4) Transportation: Bethel is the only major commercial airport located in the immediate vicinity of the spill area, and would serve as the primary logistics supply points. In most cases, equipment must be transported overwater or sling loaded via helicopter. Favorable weather conditions are also a major factor in hindering both air and water transportation for personnel and equipment.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

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 24-hours of the incident report, pending favorable

weather. The response to this spill will depend heavily upon the sea state and weather in the incident area.

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 waste management/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 oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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

The maximum most probable case is determined by the largest recorded oil spill to date in the Western Alaska subarea. The largest to date was the sinking of the local fishing vessel Mattie-O in Eek in Kuskokwim Bay. During this event, a total of 3,000 gallons of diesel were released.

Size of the Discharge: 3,000 gallons (of the 4,500 total capacity) of a vessel's capacity.

Event Description: The fishing vessel Excelcior suffers a marine casualty when the vessel strikes a submerged rock, punching a significant hole in the hull, causing uncontrolled flooding. The crew abandon's ship into a life raft and is rescued by a good-samaritan vessel. The F/V Excelcior sinks, and immediately starts to discharge all remaining fuel onboard.

Location: Approximate position - Latitude 59° 59.00' N, Longitude 162° 22.00' W.

Spill: Approximately 3,000 gallons of diesel are released over a one-hour period.

Cargo Salvage: No cargo salvage is conducted as the vessel is completely submerged.

Date: May 5

On-scene Weather: Winds: E @ 20 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

The shoreline geomorphology in the immediate vicinity of the spill is marsh tidal flats. Sand and gravel beaches, exposed wave-cut platforms and sheltered tidal flats are not expected to be impacted from this spill. The Sensitive Areas Section provides a framework for identifying any at-risk resources.

Initial Action Description:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene.

3. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:** Dispatch pollution investigators (Sector Anchorage and DEC CART) 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. All information must 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.

4. **Initial Response Actions:**
    - Dispatch rep from SECTOR Anchorage and DEC CART (Anchorage) as needed
    - Ensure health and safety of personnel
    - Complete notification procedures
    - Activate the response structure to the level deemed necessary
    - Through SSC interaction, determine spill path, resources at risk and wildlife impacts
    - Prepare Initial POLREP (USCG)
    - Prepare Initial SITREP (State)
    - Consult with DOI, DOC and the State of Alaska on potential resources at risk.
    - Conduct Endangered Species Act consultation with DOI and DOC.
    - Receive recommendation from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program).
    - Consult with natural resource trustees on the protection of sensitive areas and resources.
    - FOSC/SOSC will operate from offices and will not travel to the scene
    - 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 cleanup impractical?

        3) Can equipment be deployed without excessive risk to the life and health of personnel?

5. **Spill Response Organization:** Establish the command structure as described in the Unified Plan, Annex B. Include the FOSC, SOSC, RP's Incident Commander, and local community liaison. 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.

6. **Containment, Countermeasures and Cleanup Strategies**: Immediate containment is required to mount an effective recovery operation. Due to the small amount of fuel spilled, boom from the local community could be used to contain the majority of the fuel.

   Natural dispersion and evaporation will act to remove the product from the water surface. A spill of this volume will spread, disperse, and evaporate making recovery, if not initially contained, very difficult.

   In situ burning and dispersant strategies will not be employed.

   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 may make "chasing" this oil spill infeasible.

7. **Response Requirements:**

   a. **Equipment:** The equipment required in the State and Coast Guard facility response plans should adequately address this spill. It is unlikely that additional equipment can be brought to bear in a timely manner and at a reasonable cost to respond to this spill volume. Natural processes will drastically reduce the spill volume in a matter of hours rather than days.

   b. **Personnel:** Expect to use only local personnel for this response. The crew should be capable of deploying equipment and recovering product without assistance. Trustees and other agencies should not require augmentation or additional manpower to deal with this spill.

8. **Resource Availability and Resource Procurement:** Resources should be on hand to deal with this spill. The volume of product that can be expected to be recovered will be relatively small and additional resources will probably be unnecessary by the time they arrive on scene.

9. **Shortfalls**

   a. **Equipment:** None anticipated.

   b. **Personnel:** None anticipated.

   c. **Funding:** No funding problems anticipated.

   d. **Minimum Response Times:** Vessel owner should comply with FOSC/SOSC response time guidance.

10. **Spill Cleanup Timetable:**

    a. **Mechanical Cleanup Only:** Two days.

    b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

11. **Disposal Options:** Debris disposal is the responsibility of the RP. A small volume of oil contaminated debris will likely be produced. The RP must dispose of contaminated debris according to existing laws. The RP will typically be knowledgeable in the methods and requirements for disposing of small quantities of oiled debris.

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, adjoining shorelines, or 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 and welfare; and activities required to repair unavoidable damage resulting from removal actions have been performed.

d. RP site monitoring on a short term or long term basis may be required.

C. AVERAGE MOST PROBABLE CASE SCENARIO

The average most probable case is determined by the greatest percentage of average spills in the area over the past ten years. For the Western Alaska subarea, over 50% of oil spills were less than 10 gallons with storage facilities accounting for 90% of spill locations.

Size of the Discharge: Approximately 50 gallons of No. 1 diesel fuel.

Event Description: A lightering vessel is transferring fuel to the Newtok AVEC bulk fuel storage facility when the 4 inch transfer hose ruptures near the marine header.

Location: Approximate position - Latitude 60° 50' N, Longitude 164° 40' W.

Spill: Approximately 50 gallons of arctic diesel.

Cargo Salvage: Upon discovery of the rupture, the transfer pump is secured and the valves at the marine header and aboard the lightering vessel are closed, preventing the loss of additional cargo.

Date: May 16

On-scene Weather: Winds: W @ 25 kts, decreasing to 15 kts on second day; Sea State: 10-30ft; Temp: 40

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 immediate area of the spill that are at risk include seals and sea lions, otters, waterfowl concentrations, and seabird colonies.

The shoreline geomorphology in the immediate vicinity of the spill is marsh tidal flats. Sand and gravel beaches, exposed wave-cut platforms and sheltered tidal flats are not expected to be impacted from this spill. The Sensitive Areas Section provides a framework for identifying any at-risk resources.

Initial Action Description:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene.

   a. Initial Response Actions On-Scene:
   - Alert vessel tankerman to secure pumping
   - Secure electrical power and sources of ignition
   - Close valves to prevent the flow of fuel through the ruptured hose

- Maintain a safety zone due to health hazards; evacuate personnel as necessary
- Ensure proper PPE is available and used by responders
- Alert the RP and/or local community to activate the initial ICS
- Contain and recover the charged product
- Properly dispose of recovered oil and oily waste
- Properly decontaminate all oiled response equipment
- Consult with DOI, DOC, and the State of Alaska on potential resources at risk and the need for Endangered Species Act consultation with DOI and DOC.

b. Initial Agency Evaluation and Recommendations:

- FOSC/SOSC/RP establish direct communications
- Evaluate the RP's response capabilities
- As required, dispatch representatives to the scene at the earliest opportunity
- Ensure health and safety of all individuals
- Coordinate with local emergency response personnel to establish a Safety Zone, as necessary.
- Consult with natural resource trustees on the protection of sensitive areas and resources.
- Receive recommendations from trustee agencies on wildlife response strategies. Make decision on any recommendations (e.g. migratory bird deterrent and capture and treatment program).
- Determine feasibility of removal actions based on the following considerations:

    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 cleanup impractical?

    3) Can equipment be deployed without excessive risk to the life and health of personnel?

- Ensure development of a Site Safety Plan
- Prepare initial POLREP (USCG)
- Prepare initial SITREP (State)

3. Spill Response Organization: No command structure will be needed for a spill of this size. USCG and State DEC will monitor and dispatch personnel as needed.

4. Containment, Countermeasures and Cleanup Strategies: Due to the small amount of discharged product, nature of diesel fuel, and weather conditions, the product will likely weather quickly through evaporation and emulsification. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product through the hose and contain the spill.

5. Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Facility personnel and other emergency response personnel will likely be the most crucial individuals in this scenario.

6. **Resource Availability and Resource Procurement.** The RP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the RP to respond to this event. In the event the RP does not have adequate equipment, the ADEC and the Alaska Chadux Corporation maintain some response equipment that may be available for this scenario. Out-of-region resources are not considered necessary for this response.

7. **Shortfalls**

a. **Equipment:** No shortfall of cleanup equipment is anticipated.

b. **Personnel:** No shortfalls in personnel are anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.

d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

8. **Spill Cleanup Timetable:**

a. **Mechanical Cleanup Only:** One day.

b. **Mechanical in Conjunction with Non-Mechanical:** Not applicable.

9. **Disposal Options:** Debris disposal is the responsibility of the RP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The RP will typically be well versed in these procedures due to the nature of their fuel handling operations.

10. **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, adjoining shorelines, or 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 and welfare; and activities required to repair unavoidable damage resulting from removal actions have been performed.

SCENARIOS: PART TWO – HAZARDOUS MATERIALS RELEASE

Situation: A seafood processing vessel in Bethel sustains an ammonia release due to a valve failure. Approximately 1,500 pounds of anhydrous ammonia is released from the vessel and threatens the local community. The crew has evacuated the vessel due to the strong ammonia vapors.

Location: Bethel, 60°46.79'N 161°50.28'W

Release Information: The ammonia cloud exits from the vessel hold and proceeds to move downwind towards the populated area of Bethel.

Sensitive areas at risk: General population at Bethel.

Date/Time: May - 8:30 am.

On Scene weather: Temp: mid 30's, overcast with light rain, winds: westerly at 15 knots.

Notifications. The ADEC is notified of the situation by the DEC Bethel Field office and by Bethel emergency services personnel. The ADEC notifies the Coast Guard (MSO Anchorage) FOSC of the situation. They proceed with notifying other Federal agencies. ADEC notifies other state agencies. Because the release poses a life-threatening situation, the ADEC activates the Statewide Hazmat Response Team in both Fairbanks, Kodiak and Anchorage, and also places an ADEC term contractor on alert. The Coast Guard (Sector Anchorage) places the Pacific Strike Team on alert (due to their familiarity with responding to vessel incidents). USCG may contact EPA for support to activate their contractor as well to provide technical support to the team. An ammonia technical advisor is placed on alert and requested to provide any additional technical assistance. The initial response team will be composed of an ADEC representative, the Coast Guard FOSC from Sector Anchorage, a member from EPA, a contractor representative, a member of the Statewide Hazmat Response Team, and possibly an ammonia technical advisor. The follow-on team will consist of members of the Statewide Hazmat Response Team and other support personnel.

Initial Response Actions. The initial response team in Anchorage gathers basic equipment and departs for the scene via commercial or charter air, whichever is most expedient.

The FOSC and SOSC notify the vessel owner of their responsibilities to contain and control the release. The Responsible Party indicates that their response capability is extremely limited and they will not be able to re-enter the vessel to control the source. The State and Federal OSCs reach an agreement with the Responsible Party and the Local On-Scene Coordinator (LOSC) to take whatever measures necessary to respond to the release.

Equipment Mobilization and Deployment. The follow-on Statewide Hazmat Response Team has marshaled their team and equipment in Anchorage and is ready to deploy via charter aircraft to Bethel. Estimated time of arrival of the team is anticipated to be sometime in the early afternoon. The Coast Guard's Pacific Strike Team will also deploy several technical specialists to assist with the response.

Public Protection. Local protection priorities in Bethel include ensuring the protection of the general public through sheltering in-place or evacuation to a safe location.

Response Actions. The LOSC immediately notifies the local populace to shelter in-place if possible. Detailed shelter in-place instructions are provided over the radio and public address system. If evacuation becomes necessary, local officials have determined an appropriate process for evacuating the general public via a safe route to a pre-determined area.

Upon arrival of the initial response team, emergency response personnel in proper PPE and equipped with ammonia detectors are tasked to deploy and monitor readings downwind from the release.

The LOSC, FOSC, and SOSC form a Unified Command with the Responsible Party to manage the incident.

As long as an immediate threat to public safety exists, the LOSC serves as the ultimate command authority for the public safety issue, while the FOSC, SOSC, and Responsible Party Incident Commander work with the LOSC to ensure mitigation of the situation. So long as the threat to public safety remains, the LOSC will be guided by the applicable Local Emergency Response Plan developed by the local emergency services staff. If the FOSC, SOSC, or Responsible Party Incident Commander does not assume the lead role for response, the LOSC may request higher authority to assume that responsibility. (See the **Unified Plan, Annex B**.)

The ammonia technical advisor reviews the vessel refrigeration schematics with the ship's captain, and attempts to determine the approximate location of the release source. An entry plan is developed prior to the arrival of the Statewide Hazmat Response Team.

Upon arrival of the team, a three-stage entry process is determined to be the best approach. The first entry will be to ventilate the vessel using existing ventilation systems and portable, positive pressure ventilation fans. The second entry team will determine the location of the release source, and the third team will secure the source by closing off upstream valves.

Personnel who may have been exposed to the ammonia vapors will be treated locally or airlifted to the nearest major hospital, depending on the nature of their injuries.

Clean Up and Recovery. Upon securing the source, the Statewide Hazmat Response Team will be released back to their normal work location (Anchorage, Kodiak or Fairbanks). The EPA contractor and the ADEC contractor will continue with periodic air monitoring until the vessel owner is able to effect permanent repairs to the vessel's ammonia refrigeration system.

SCENARIOS: PART THREE – INLAND OIL

A. WORST CASE SCENARIO

This scenario is based on the Facility Response Plan for the Aniak Crowley Bulk Fuel Facility, Lower Tank Farm worst case discharge scenario.

Size of the Discharge: 224,000 gallons diesel

Event Description: Tank #22-447 at the Crowley tank farm sustained a catastrophic failure of unknown cause in the early morning hours of September 20th The tank was full, resulting in an immediate and complete loss of its contents causing a large wave inside the secondary containment area which broke through the dike.

This spill response benefits from a large flood prevention dike that surrounds the community – however, a breach in this dike has allowed fuel to reach the Kuskokwim River. There is visible fuel in the river. Fuel has accumulated in low lying areas and along the base of the flood prevention dike.

Location: Aniak, AK, Latitude 61° 35'N; Longitude 159° 31'W.

Spill: Approximately 224,000 gallons diesel with at least 200,000 gallons released outside of secondary containment. Much of this volume traveled to the Kuskokwim River, with some ground penetration and on-land accumulation.

Date: October 20

On-scene Weather: Temp: High 35° F, Low 22° F; Winds: SW @ 10 mph;
Precipitation: None.

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 immediate area of the spill that are at risk include the Kuskokwim River, and the waterfowl and fish species that utilize these waters.

Aniak is approximately 135 miles upriver from Bethel. (Tidal influence on the Kuskokwim River extends inland to Bethel.) The Bering Sea is an additional 40 miles from Bethel. Assuming a 2 knot current, it is anticipated that the extent of fuel will reach Bethel, 60 hours after fuel enters the river. The actual current may be faster.

The fish, wildlife and plants of the area constitute important subsistence resources, which provide direct benefits to the residents. The Yukon-Kuskokwim Delta in an important bird area, providing valuable habitat and the migration route for waterfowl, sea birds and shore birds.

Initial Action Description:

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

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 impacted communities
*** Federally-recognized tribes in impacted 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.
- 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 Kuskokwim 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 CART) 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 prior to reaching Kuskokwim River and in the waters of Kuskokwim River.

Initial Response Actions:

- *Secure the Source. The secondary containment area is sealed/valve closed to prevent additional discharge. The facility response team and additional local/regional resources are activated.*
- *The Federal/State Unified Plan and Bristol Bay 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 the U.S. EPA warehouse in Anchorage, AK. Additional initial Unified Command tasks include:
    1. Evaluate PRP'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- Plan for either Aniak, Bethel or Nenana (nearest transportation hub).
    6. 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 clean up 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 established Geographic Response Strategies (GRS), when possible (available only for coastal areas).
- Utilize local knowledge, SSC and other NOAA hazmat resources as necessary to predict spill trajectory and potential impacts.
- Establish local (Anchorage) command post while individuals are en route to the field command post and plan for relocation to the region.
- 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 impacted 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:
    - EPA will maintain the FOSC throughout the spill response due to the largest impacts occurring in the inland zone. USCG Sector Anchorage would be requested to assist with response activities in the coastal zone.
    - 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 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. 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 PRP's Facility Response Plan, response tactics to contain and cleanup the spill are implemented. Primary objectives are:
    - Prevent oil from reaching the Kuskokwim River. Containment dikes and trenches using handtools and earthmoving equipment will be constructed.
    - Prevent oil from traveling downstream and entering marine waters of the Bering Sea. Sorbent Boom applied at the point(s) of entry into the river and additional points downstream as current and terrain allow.

  Tactics to achieve these objectives include:
    - Contain spill on land, to extent possible, with containment dikes and trenches constructed using handtools and earthmoving equipment
    - Use booms to contain oil at point of entry and in side channels of the Kuskokwim River.
    - Recovery of oil in river using sorbent material (sweeps and booms).
- 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:

a. **Equipment:** The nearest equipment will be located at the tank farm facility. This equipment will need to be augmented with additional equipment, including but not limited to boom, vacuum units, super suckers, earth moving equipment and other oil recovery equipment to insure timely recovery. It is possible that additional equipment

can be brought in a timely manner from regional partners, but it will likely be shipped in from Anchorage.

Quick deployment of containment measures, high volume oil recovery equipment and other mechanical collection equipment is essential to ensure success of the response and to mitigate spill damage. A spill of this size and location will require all area response equipment as well as out-of-region response equipment in a joint coordinated cleanup effort. Section B of this plan (Western Alaska SCP) includes a list of some of the equipment available in or deployable to the Western Alaska subarea.

b. **Personnel:** Initial facility response personnel would likely have to be augmented by local and mutual aid partners. The facility crews should be capable of deploying equipment and recovering product with assistance of other partners.

c. **Additional Mobilization of Government Personnel:** This scenario contemplates a response beyond the ability of the facility and local personnel. In such an instance the Federal On-Scene Coordinator and State On-Scene Coordinator will provide oversight of the response through the Unified Command. Additional federal and state agencies with roles and responsibilities in the federal and state response systems as detailed in the National Contingency Plan and the Alaska Unified Plan will be integrated into appropriate sections within the incident command system. The following provides examples of such integration but is not meant to be totally inclusive of all-possible roles and responsibilities for assisting agencies.

Operations oversight of field teams will be accomplished by placing government monitors from EPA, US Coast Guard's Pacific Strike Team, and ADEC personnel with industry task forces.

Shoreline Clean up Assessment Teams utilized to survey spill impacted areas and recommend treatment methods will be composed of EPA, ADEC, state land managers, cultural resource specialists and industry representatives. Composition of teams will follow general guidance found in NOAA HAZMAT publications and other pertinent documents.

Individuals from USFWS and ADF&G will monitor wildlife teams involved in hazing and capture.

The Incident Management Team's planning section will be supplemented with technical specialists from the following government agencies;

- Waste Management - EPA / ADEC
- Wildlife Protection – USFWS / ADF&G
- Cultural Resource Protection – Federal & State Cultural Resource Contract Specialists
- Land Management – ADNR

These personnel will facilitate the overall response operation by assisting the FOSC and SOSC in authorizing and permitting activities under their jurisdiction when appropriate. This is not an all-inclusive list.

Resource Availability and Resource Procurement.
For the purposes of this scenario, it is assumed that agreements would be reached between all involved parties (EPA, USCG, State of Alaska, and the PRP) that would allow the resources of the spill cooperatives 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. A communications network is already in place and available for immediate usage.

Procuring the resources identified in this spill response is the PRP's responsibility. A spill of this magnitude would likely exceed $100,000 per day during the initial stages of the response. Committing this volume of funds in a short time is essential. Failure, on the part of the PRP, 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 PRP is unable or unwilling to pay the costs of the spill response. 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

a. **Equipment:** The primary equipment shortages are expected to in regards to specialized transportation equipment: helicopters and boats. Adequate PPE on or near water will also be a concern and not initially available in adequate quantities. "Mustang" suits, float coats, dry suits, or inflatable PFDs will be preferable for sustained operations compared to cool weather clothing plus a standard PFD.

b. **Personnel:** None anticipated.
(1) Housing – Limited housing is available in Akiak. On-site "field camps" will be required to sustain the response. Several organizations in Alaska cater "field camp" setups which include housing and feeding facilities. These facilities are available in flyaway form. However, these camps may have limited availability/already be in use in late September. It is expected that field camp facilities for housing, dining and work space will need to be transported to the site from vendors in the Lower 48. This may take several days to arrange, transport and set-up. Additional considerations for a field camp will include water, electricity and heating. Depending on the location(s) of field camps, existing gravel pads may not be sufficient for staging. Arrangements will need to be made with ADEC and industry for the construction of additional gravel pads or re-siting camp and staging area locations.

(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. However, catering service may need to be brought in from Anchorage, AK.

(3) Fuel –Arrangements for remote fueling stations would need to be arranged to supply the vehicles and equipment operating in the area.

(4) Transportation: Bethel is the nearest major commercial airport located in the immediate vicinity of the spill area, and would serve as the regional logistics supply point. Limited scheduled flights or charter flights are available from Anchorage; an 1.5 hour flight. The Kuskokwim River is navigable. Favorable weather conditions are also a major factor in transportation for personnel and equipment.

Air Transportation: Helicopters will be required to transport personnel to areas inaccessible by boat or ATV. Fixed wing aircraft may be utilized for overflights to assess conditions, but will have limited functionality in other response activities.

Boats: The Kuskokwim River is navigable from the Bering Sea. The number of readily available boats, capable of handling the conditions of the Kuskokwim River will likely be limited and arrangement for the procurement and hiring of these boats will need to be addressed in the response.

(5) Manpower and Training: Shoreline cleanup crews will require OSHA level Hazwoper training commensurate with the tasks they will be directed to perform. Volunteers will not be solicited, and individuals desiring to help will be directed to a central coordinator for hiring emergency response workers.

c. **Funding:** Funds availability and access should pose no problem regardless of the financial capabilities of the PRP. 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:** Emergency response personnel should respond as soon as possible to the spill site with safety parameters in mind. Travel into Akiak is by scheduled or charter flight or boat and expected to be 1.5 hours minimum. If direct flights are not available, arrangements will need to made with flights from either Bethel or Nenana.

Spill Cleanup Timetable:

The spill response will continue until all recoverable oil is collected. Riverbank and shoreline cleanup will begin immediately. On-land cleanup will continue until all recoverable oil is collected and satisfactory soil cleanup levels are reached, as determined by ADEC. The initial response phase is expected to transition to a management phase after 1 month. Shoreline cleanup will continue until freeze-up, as necessary.

Ongoing monitoring may continue beyond this period. Depending on the extent of oil released into surrounding tundra and muskeg or to wetlands adjacent to the Kuskokwim River, oil may continue to leach out for an extended period of time, and would require monitoring.

Disposal Options:
Debris disposal is the responsibility of the PRP. 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 PRP must present a waste management/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 large volume of oil 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 as well as the potential for long-term storage capabilities due to severe weather preventing timely transportation disposal of accumulated waste. 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:

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. AVERAGE MOST PROBABLE CASE SCENARIO

> In the Western Alaska Subarea, over 50% of oil spills were less than 10 gallons, however, a small release such as this is unlikely to require outside resources to respond to the spill. This scenario is designed to be a typical spill that would require response assistance beyond of immediately available and local resources.

Size of the Discharge: 1,500 gallons of No. 1 diesel fuel.

Event Description: A spill resulted from a tank overfill at the Tuluksak Native Community, Native Store tank farm. It was subsequently discovered that a valve on the secondary containment was left open resulting in a discharge outside of containment of approximately 1,000 gallons. Fuel outside of the containment area has collected in low lying areas and percolated into the silty soil and some has traveled in the direction of the Tuluksak River. There is visible staining on the ground showing drainage to the river and a sheen has been reported on the river.

Location: Approximate position - Latitude 61° 06' N, Longitude 160° 58' W.
Tuluksak is located on the south bank of the Tuluksak River, at its confluence with the Kuskokwim River

Date: August 8

On-scene Weather: Temp: High 56° F, Low 42° F; Winds: SW @ 15 mph;
Precipitation: Rain

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 immediate area of the spill that are at risk include the Kuskokwim River, and the waterfowl and fish species that utilize these waters.

Tuluksak is approximately 55 miles upriver from Bethel. (Tidal influence on the Kuskokwim River extends inland to Bethel.) The Kuskokwim River drains into the Bering Sea, 40 miles from Bethel. Assuming a 4 knot current, it is anticipated that fuel will reach Bethel, 12 hours after fuel enters the river and Bering Sea in 21 hours. The actual current may be faster.

The fish, wildlife and plants of the area constitute important subsistence resources, which provide direct benefits to the residents. The Yukon-Kuskokwim Delta in an important bird area, providing valuable habitat and the migration route for waterfowl, sea birds and shore birds.

Initial Actions:

1. **Notification:** All notifications identified in the Worst Case Scenario will be utilized in this scenario. See above.

2. **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. Establish contact with the responsible party as quickly as possible, preferably an individual on scene. Begin recall of local in-house personnel (EPA, ADEC, ADNR, etc.) as needed to support a spill of this magnitude.

3. **Initial On-Scene Investigation/Inspection, Evaluation and Recommendations:**
   - Dispatch representatives to the scene at the earliest opportunity.
   - FOSC/SOSC/PRP establish direct communications
   - Ensure health and safety of all individuals
   - Coordinate with local emergency response personnel to establish a Safety Zone
   - Evaluate the RP's response capabilities

4. **Initial Response Actions On-Scene:**
   - Stop any discharge from the truck, if possible
   - Maintain a safety zone
   - Ensure proper PPE is available and used by responders
   - Activate the response structure to the level deemed necessary
   - Establish a command post
   - Evaluate PRP's initial actions and evaluate capability to carry out response
   - Prepare Initial POLREP (EPA)
   - Prepare Initial SITREP (State)
   - Ensure development of a Site Safety Plan
   - As required, dispatch representatives to the scene at the earliest opportunity (EPA and/or State)
   - Determine feasibility of removal actions based on:

     a. Will removal actions cause more damage to the environment than allowing the pollutant to naturally dissipate?

     b. Can cleanup be initiated before the pollutant disperses, making cleanup impractical?

     c. Can equipment be deployed without excessive risk to the life and health of personnel?

Spill Response Organization: No command structure will be needed for a spill of this size. USCG and State ADEC will monitor and dispatch personnel as needed. The ADEC responder in Bethel may be dispatched to the incident.

Containment, Countermeasures and Cleanup Strategies: Due to the amount of discharged product, nature of diesel fuel, and location the majority of release product is expected to be on land, percolating into the soil, with some draining to the river. Terrestrial containment and diversion measures are the primary containment and control techniques, with boom deployed at the point of entry(s) into the river. Safety of response personnel is of primary importance, as is early detection of the rupture and quick action to secure flow of product by closing the open valves.

Response Requirements:

a. **Equipment:** Personal Protective Equipment for response personnel required to approach the vicinity of the spill is mandatory.

b. **Personnel:** Facility personnel will likely be the most crucial individuals in this scenario.

Resource Availability and Resource Procurement. The PRP is required to have resources on hand to respond to spills. It is anticipated that adequate resources would be available from the PRP to respond to this event. In the event the PRP does not have adequate equipment, ADEC maintains some response equipment that may be available, through appropriate agreements, for this scenario. A contractor will likely be procured to assist the PRP with the response and cleanup.

Shortfalls

a. **Equipment:** No shortfall of cleanup equipment is anticipated.

b. **Personnel:** No shortfalls in personnel are anticipated.

c. **Funding:** Funds availability and access are not anticipated to be a problem due to identification of a responsible party. Federal and State could access their respective spill funds if necessary.

d. **Minimum Response Times:** Response times in excess of one hour may prove futile with regard to recovering any free product or containment to control the migration and areas impacted by the spill. Emergency response personnel should respond immediately to the spill site to maintain safety.

Spill Cleanup Timetable:

a. **Mechanical Cleanup Only:** Cleanup likely by mechanical means. It is expected that cleanup will be complete by the end of summer.

b. **Mechanical in Conjunction with Non-Mechanical:** Non-mechanical options are not considered viable for response to this scenario.

Disposal Options: Debris disposal is the responsibility of the PRP. Limited amount of contaminated debris will likely be produced. Disposal procedures must meet Federal and State requirements. The PRP will prepare a cleanup/waste management plan and submit to ADEC for approval.

Cleanup Termination: 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, adjoining shorelines, or 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 and welfare; and

d. Activities required to repair unavoidable damage resulting from removal actions have been performed.