

# ALEUTIANS SUBAREA CONTINGENCY PLAN

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## BACKGROUND: PART ONE – SUPPORT INFORMATION

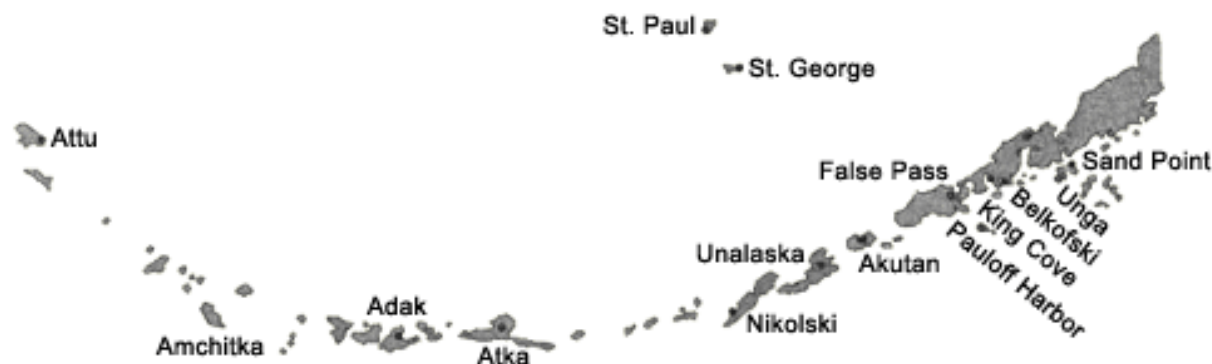
### A. SUBAREA PLAN

This Subarea Contingency Plan (SCP) supplements the *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (Unified Plan)*. The SCP in conjunction with the *Unified Plan* describes the strategy for a coordinated federal, state and local response to a discharge or substantial threat of discharge of oil or a release of a hazardous substance from a vessel, offshore or onshore facility, or vehicle operating within the boundaries of the Aleutians Subarea. For its planning process, the federal government has designated the entire state of Alaska as a planning “region” and the western half of the state as a planning “area.” The State of Alaska has divided the state into ten planning regions of which one is the Aleutians Region. As part of the *Unified Plan*, this SCP addresses this Aleutians Region or, to avoid confusion with federal terms, Subarea.

This plan shall be used as a framework for response mechanisms and as a pre-incident guide to identify weaknesses and to evaluate shortfalls in the response structure before an incident. The plan also offers parameters for vessel and facility response plans under the Oil Pollution Act of 1990. Any review for consistency between government and industry plans should address the recognition of economically and environmentally sensitive areas and the related protection strategies, as well as a look at the response personnel and equipment (quantity and type) available within the area (including federal, state, and local government and industry) in comparison to probable need during a response.

### B. SUBAREA DESCRIPTION

As defined by Alaska regulations, the Aleutians Subarea encompasses the boundaries of the Aleutians East Borough, the Pribilof Islands, and the Aleutians West Coastal Resource Service Area, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on the line is 200 nautical miles from which the territorial sea is measured.



Physical Features: 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. The population is distributed among predominantly isolated coastal communities. Major communities include the cities of Unalaska, Sand Point, and St. Paul. 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.

Socio-Economic: 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.

Dutch Harbor is also used temporarily as an offshore oil/gas staging area for Bering Sea offshore exploration. There is some potential for offshore oil and gas development in the North Aleutian Basin.

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.

Oil Activities: In the Aleutians, Unalaska/Dutch Harbor serves as the major regional hub for the distribution of noncrude 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.

Deliveries of noncrude oils into the Aleutians are from the south, primarily Puget Sound or from upper Cook Inlet. Noncrude oil originating from upper Cook Inlet and West Coast ports also passes through the area en route to the Far East, and transport in the reverse direction is also true.

General: There are 12 communities in the region, 10 Native and 2 non-Native.

## **C. AREA OF RESPONSIBILITY**

This SCP covers the region outlined above. The USCG Captain of the Port (COTP) for Western Alaska is the pre-designated Federal On-Scene Coordinator (FOSC) for navigable water ways within the subarea (as agreed to and stipulated in a memorandum of understanding between EPA and USCG). EPA is the pre-designated FOSC for the Inland Zone which encompasses all lands, rivers, streams, and drainages inland of the 1000-yard wide band which parallels the Alaskan coastline. These zones are clearly defined in the *Unified Plan*. It is possible that incident may occur in locations that do not fall under federal jurisdiction and there will be no FOSC in these instances.

The State of Alaska places jurisdiction of spill response for the Aleutians Subarea under the Central Alaska Response Team (CART) of the Alaska Department of Environmental Conservation (ADEC). The State On-Scene Coordinator (SOSC) for the CART is the pre-designated SOSC for the entire Aleutians Subarea.

Memoranda of Understanding/Agreement (MOU/MOA) between the USCG/EPA and the EPA/State of Alaska further delineate the OSC responsibilities. The *Unified Plan, Annex K* includes copies of these MOUs/MOAs.

#### D. REGIONAL STAKEHOLDER COMMITTEE

A Regional Stakeholder Committee (RSC) will normally be activated for significant incidents. The RSC was previously referred to as the Multi-Agency Coordination Committee (MAC). Unlike the MAC defined in the ICS of the National Incident Management System, the RSC for a spill response does not play a direct role in setting incident priorities or allocating resources. The RSC can advise the Unified Command (under the guidance of the Liaison Officer) and provide comments and recommendations on incident priorities, objectives and action plans.

The figure below provides the general location of the RSC in relation to the Unified Command organizational structure and suggested/potential membership of the RSC. Membership on the RSC is dependent upon the location of the incident and the interests or jurisdiction of the affected communities, landowners, and special interest groups. Government agencies will not normally use the RSC to provide input to the Unified Command. Federal agency personnel will participate within the ICS structure under the leadership of the FOSC; state personnel will do so under the guidance of the SOSC. During an incident in which no FOSC is taking part, federal agencies with jurisdictional responsibilities for resources at risk could participate as a member of the RSC, thus retaining a channel for input on containment, oversight, and cleanup. The preferred approach is to include these agencies as part of the overall ICS structure.



\* As long as there is an immediate threat to public safety, the Local On-Scene Coordinator (LOSC) will serve as the ultimate command authority if the FOSC or SOSC does not assume the lead role for response, or the LOSC requests a higher authority to assume that responsibility.

##### Suggested Membership:

- Representatives or Community Emergency Coordinators from affected communities. These may include:

Adak	Akutan	Atka	Cold Bay
False Pass	King Cove	Nelson Lagoon	Nikolski
Sand Point	St. George	St. Paul	Shemya
Unalaska/Dutch Harbor			
- Federal/state/local or private landowners and leaseholders (e.g., National Parks Service, Alaska Department of Natural Resources)
- Native corporations, organizations and communities
- Special interest groups affected by the incident

As indicated above, the RSC is not directly involved in tactical operations, though some of its members may be. The RSC's role is to convey to the Unified Command information relating to the authority, concerns and expertise of its members. RSC members recommend to the Unified Command overall objectives and priorities and review the Incident Action Plans developed by the Unified Command.

RSC activities will be coordinated by the Liaison Officer. RSC discussions will be documented, and recommendations or dissenting opinions expressed outside of the RSC meetings with the Unified Command will be communicated to the Unified Command through the Liaison Officer. The RSC will be chaired initially by the Liaison Officer. After convening, the RSC will then elect its own chair.

## **E. SUBAREA COMMITTEE**

The primary role of the Subarea Committee is to act as a preparedness and planning body for the subarea. The pre-designated FOSC for the subarea and the pre-designated SOSC from ADEC compose the primary membership of the Subarea Committee. Each member is empowered by their own agency to make decisions on behalf of their organization and to commit the organization to carrying out roles and responsibilities as described in this plan and the *Unified Plan*.

The pre-designated FOSCs for the area (EPA & USCG), and the SOSC will serve as chairpersons of the committee. They will select work group members and provide general direction and guidance for the work groups and the Subarea Committee.

The Subarea Committee is encouraged to solicit advice, guidance or expertise from all appropriate sources and establish work groups as necessary to accomplish the prepared need and planning task. The FOSC should solicit the advice of the Alaska Regional Response Team to determine appropriate work group representatives from federal, state, and local agencies.

### **1. Subarea Committee Members**

The Aleutians Subarea Committee is comprised of representatives from the following federal, state and local agencies:

- U.S. Coast Guard, COTP Western Alaska
- U.S. Environmental Protection Agency
- Alaska Department of Environmental Conservation
- Borough or local government, when applicable

The Aleutians Subarea Committee also seeks advice and expertise concerning environmental and economic issues from international, federal, state and local agencies, and private industries, such as:

- Local borough, city and tribal governments
- Federally-recognized tribes
- Regional/local businesses
- Local Emergency Planning Committees
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- Alaska Department of Military and Veteran Affairs
- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration

- U.S. Department of the Interior-Office of Environmental Policy and Compliance
  - U.S. Fish and Wildlife Service
  - National Park Service
  - Bureau of Land Management

## 2. Subarea Work Groups

The Subarea Committee seeks to solicit advice, guidance or expertise from all appropriate sources and establish work groups as necessary to accomplish the preparedness and planning tasks. The Subarea Committee selects the work group members and provides general direction and guidance for the work groups. In addition to federal, state and local agency representatives, work group participants may include facility owners/operators, shipping company representatives, cleanup contractors, emergency response officials, marine pilot associations, academia, environmental groups, consultants, response organizations and representatives from any applicable regional citizens' advisory councils.

The Aleutians Subarea Committee has formed the following work groups:

The Sensitive Areas Work Group is chaired by the Department of Interior-Office of Environmental Policy and Compliance representative. This work group coordinates the preparation of the necessary information for each separate subarea and ensures that the information is submitted in a common format. Participation by local community staff is vital to acquire local input and validate existing information. The Aleutians Subarea-specific sensitive areas information has been prepared and incorporated into the *Sensitive Areas Section* of this plan.

The Logistics Work Group is co-chaired by representatives from USCG, EPA, and ADEC. This work group is responsible for preparing the *Resources Section* of this plan.

The Operations Work Group is co-chaired by representatives from USCG, ADEC and EPA. This work group is responsible for scenario development and the refinement/expansion of the Emergency Notification Lists located in the *Response Section* of this plan.

## BACKGROUND: PART TWO – RESPONSE POLICY & STRATEGIES

The strategy for responding to a specific spill or hazmat incident depends upon numerous factors. The strategy can change as the situation changes. As a general rule, the strategies listed below should be used as a guide in developing an effective response. Consider all factors that may affect the particular situation and revise/modify/expand these priorities as the situation dictates. The *Response Section* of this plan contains some specific information on response procedures and ramp-up timelines. Additional information can be found in the *Unified Plan*.

### A. FEDERAL RESPONSE ACTION PRIORITIES/STRATEGIES

The following priorities are general guidelines for response to a pollution incident within the COTP Western Alaska zone. They are based in the premise that the safety of life is of paramount importance in any pollution incident, with the protection of property and the environment, although important, being secondary. Nothing in this part is meant to indicate that higher priority items must be completed before performing a lower priority task. They may be carried out simultaneously or in the most logical sequence for each individual incident.

- Priority One: Safety of Life – For all incident which may occur, the safety of personnel, including response personnel, must be given absolute priority. No personnel are to be sent into an affected area without first determining the hazards involved and that adequate precautions have been taken to protect personnel.
- Priority Two: Safety of Vessel/Facility and Cargo – The facility and/or vessel and its cargo shall become the second priority.
- Priority Three: Protection of the Environment by elimination of the pollution source – Containment and recovery of oil in the open water must be effected expeditiously to preclude involvement of the beaches and shorelines. Due to remote location and restricted accessibility, it is extremely difficult to protect the majority of coastline by diversion and exclusion methods. Therefore, securing the source and open water containment and recovery are especially critical and should normally be the first line of defense to protect the environment. Likewise, spills which occur on land or in upland water courses will be dammed, boomed, diked, etc., as feasible to prevent the spread of the pollutant downstream. Note: In situ burning (*Unified Plan, Annex F* for checklist) of a vessel and its pollutants may be an alternative considered by the OSCs; this strategy places environmental protection priorities above saving the vessel and its cargo.
- Priority Four: Protection of the Environment by diversion/exclusion, dispersion, or in situ burning – In the event of that the location of a spill or the weather conditions do not permit open water recovery, protection of the shoreline becomes paramount, especially areas of greatest sensitivity. It is not possible to protect some areas entirely or even in part. It may be necessary to sacrifice some area in order to achieve the best overall protection of the environment, The OSC may consider in situ burning as a response option. *Refer to the Unified Plan, Annex F, Appendix II* for an in situ burning checklist. The use of dispersant must be considered early in the response phase while the oil is in the open water and conditions are agreeable. The *NCP, Subpart J* and the *Unified Plan, Annex F, Appendix I* address in detail the responsibilities of the FOSC in the use of chemicals.
- Priority Five: Protection of the Environment by beach cleanup and the use of sacrificial areas – It may not be possible to protect the entire shoreline from oil; in fact, spilled product may be

allowed purposely to come ashore in some areas as an alternative to damaging other, more sensitive areas. Selection of the proper shore line cleanup technique depends on many different factors, including the following:

- Depth of oil in the sediment
- Type of oil (tar balls, pooled oil, viscous coating, etc.)
- Trafficability of equipment on the shoreline
- Environmental or cultural sensitivity of the oil shoreline
- Prevailing oceanographic and meteorological conditions

The best way to minimize debate over the most appropriate response is to involve all interceded government and private agencies and other stakeholders. The shoreline assessment groups shall attempt to agree on the amount and character of the oil that is on the shorelines, anticipate interactions between the stranded oil and the environment, and assess the geological and ecological environment of the involved shorelines. Once a consensus is met on these parameters, an approach must be developed to determine the proper treatment required.

Shoreline cleanup options may include the use of physical and/or chemical processes. Physical shoreline cleaning methods include techniques such as natural recovery, manual sorbent application, manual removal of oiled materials, local pressure flushing, manual scraping, mechanical tilling, and mechanical removal using heavy equipment. Chemical shoreline cleanup products may increase the efficiency of water-washing during the cleanup of contaminated shorelines. However, the product must be listed on the NCP Product Schedule, and authorization must be obtained from the ARRT and the OSC of the spill. Bioremediation is also considered as a shoreline cleaning method. Bioremediation is the application of nutrients to the shoreline to accelerate the natural biodegradation of oil. The OSCs shall request site-specific guidelines for source protection measures required during shoreline cleanup operation.

## **B. STATE OF ALASKA RESPONSE PRIORITIES**

- **Safety:** Ensure the safety of persons involved, responding, or exposed to the immediate effects of the incident.
- **Public Health:** Ensure protection of public health and welfare from the direct or indirect effects of contamination of drinking water, air, and food.
- **Environment:** Ensure protection of the environment, natural and cultural resources, and biota from the direct or indirect effects of contamination.
- **Cleanup:** Ensure adequate containment, control, cleanup and disposal by the responsible party or supplement or take over when cleanup is inadequate.
- **Restoration:** Ensure assessment of contamination and damage and restoration of property, natural resources and the environment.
- **Cost Recovery:** Ensure recovery of costs and penalties to the Response Fund for response, containment, removal, remedial actions, or damage.



## BACKGROUND: PART THREE - SUBAREA SPILL HISTORY & OIL FATE

### A. NAVIGABLE WATERS SPILL HISTORY

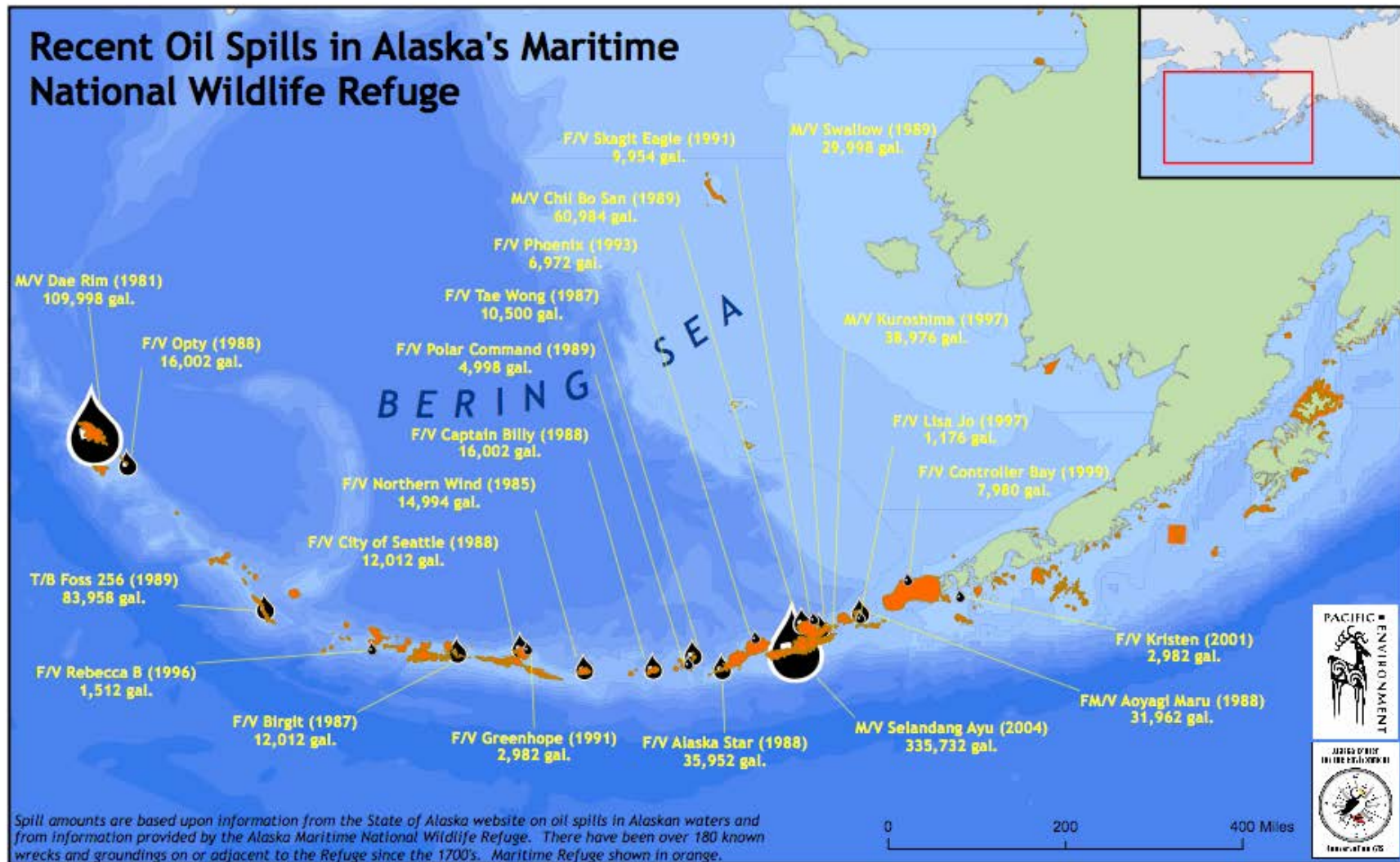
The following spill history was obtained from ADEC and USCG. This partial listing includes only the more significant spills (over 1000 gallons) or hazardous material releases (over 100 pounds), plus several potentially severe incidents. This partial and abbreviated spill history is provided to give an overall view of the vast array of facility and transportation-related accidents that can occur.

The Aleutians Subarea is transited by a wide variety of fishing vessels, tankships (light refined products) and tank barges (light refined products), foreign and domestic freight vessels (persistent heavy fuel oil and light refined products), and military vessels (heavy and light refined products). Dutch Harbor is the major refueling/resupply port in the region, making the possibility of a spill high.

**Navigable Waters Spill History**

Date	Incident	Location	Released (Gallons)	Product Released
3/5/1981	M/V <i>Dae Rim</i>	Attu Island	110,000	2 fuel oil
12/8/1986	F/V <i>Jamie Lynn</i>	Saint Paul Island	3,000	Diesel
12/10/1986	Aleutians Islands National Wildlife Refuge	Adak Island	27,000	JP-5
5/11/1987	T/V	North of Unimak Pass	2,674	Diesel
11/3/1988	F/V <i>City of Seattle</i>	Crescent Bay, Atka Island	10,000-12,000	Gasoline
12/3/1988	F/V <i>Opty</i>	Shemya Island	16,000 1,000 400	Diesel Hydraulic Oil Lube Oil
12/26/1988	Tank Barge 283	East of Shumagin Island	2,041,662	Diesel
1/17/1989	Tank Barge Foss 256	Amchitka Island	84,000	Diesel
2/20/1989	M/V <i>Yard Arm Knot</i>	Saint Paul Island	3,500	Diesel
10/15/1989	F/V <i>Polar Command</i>	Islands of Four Mountains	5,000	Diesel
8/13/1991	F/V <i>Greenhope</i>	Atka Island	3,000	Diesel
7/22/1995	F/V <i>Northern Wind</i>	Nazan Bay near Seguam Island and Atka	15,000	Diesel
8/10/1995	Akutan Fish Oil Spill	Akutan Bay	1,000	Fish Oil
10/24/1996	F/V <i>Rebecca B</i>	Tanaga Island	1,500	Diesel
11/26/1997	M/V <i>Kuroshima</i>	Summer Bay, Unalaska	39,000	Bunker
5/8/1999	F/V <i>Controller Bay</i>	Unimak Island	8,000	Diesel
5/11/2001	F/V <i>Kristen</i>	Cold Bay	3,000	Diesel
8/26/2003	F/V <i>Decade</i>	King Cove	3,000	Diesel
12/8/2004	M/V <i>Selendang Ayu</i>	Unalaska	321,052 14,680	IFO 380 Diesel
1/13/2005	Tarball Mystery Spill	Attu	1,520	Bunker
2/23/2006	F/V <i>Northern Dawn</i>	Volcano Bay	1,000	Diesel
2/10/2007	F/V <i>Illusion</i>	Makushin Bay	1,000	Diesel
3/18/2007	F/V <i>Exodus Explorer</i>	Kuluk Bay – Gannet Rocks	3,000	Diesel
3/23/2008	F/V <i>Alaska Ranger</i>		145,000	Diesel
2/25/2009	F/V <i>Icy Mist</i>	Northwest Corner of Akutan Island	2,700 135,000	Diesel Other
10/30/2009	F/V <i>Carley</i>	Sedanka Island	2,000	Diesel
2/15/2011	F/V <i>Aleutian Lady</i>	Unalaska	1,100	Diesel
6/26/2011	Tug <i>Aries</i>	Saint Paul	1,000	Diesel
2/26/2012	F/V <i>Neptune I</i>	Unimak Island	1,670	Diesel
11/13/2012	Polar Wind Tug and Barge	Ukolnoi Island	6,000	Diesel

Date	Incident	Location	Released (Gallons)	Product Released
11/1/2013	F/V Arctic Hunter	Unalaska	6,500	Diesel



**B. INLAND SPILL HISTORY**

Date	Incident	Location	Released (Gallons)	Product Released
7/5/1995	Trident Seafood Cannery	Akutan	10,000	Diesel
7/2/1996	Eareckson Air Force Base	Shemya	4,000	Diesel
1/10/1998	Thermal Treatment Facility	Dutch Harbor	3,675	Diesel
3/12/1998	Adak Elementary School	Adak	3,400	Aviation Fuel
4/13/1998	USCG Station Attu Tank Farm	Attu	4,800	Gasoline
2/24/1999	Saint Paul City Tank Farm	Saint Paul Island	1,500	Diesel
4/29/2000	Ivanof Bay Power Plant	Ivanof Bay	1,529	Diesel
9/10/2000	Peter Pan Seafoods	False Pass	1,000	Diesel
12/26/2004	Nikolski Tank Farm	Nikolski	5,000	Diesel
6/28/2006	USCG C-130 Aircraft Spill	Saint Paul Island	1,000	Aviation Fuel
2/3/2007	Dutch Harbor Airport	Dutch Harbor	1,000	Diesel
2/15/2007	Old Rock Quarry	Sand Point	5,930	Used Oil
1/11/2010	Adak Petroleum	Adak	68,746	Diesel
12/30/2010	Unisea Power Plant	Dutch Harbor	1,700	Diesel
3/4/2012	Peter Pan Seafoods Tank Farm	False Pas	4,373	Diesel
1/3/2013	Unisea Inc	Unalaska	1,000	Diesel
7/13/2013	Peter Pan Seafoods	King Cove	3,500	Diesel

**C. HAZMAT RELEASE HISTORY**

Date	Incident	Location	Released (Pounds)	Product Released
12/3/1995	Trident Seafoods	Saint Paul Island	1,500	Anhydrous Ammonia
9/5/1996	Arctic Enterprise	Dutch Harbor	1,500	Anhydrous Ammonia
10/12/1996	M/V <i>Storffjord</i>	Dutch Harbor	4,000	Anhydrous Ammonia
5/6/1999	F/V <i>Ying Fa</i>	Adak	100	Anhydrous Ammonia
2/4/2000	Adak Naval Air Station	Adak	320	Chlorine
5/3/2000	Adak Seafoods	Adak	20,000	Freon
6/2/2000	Adak High School	Adak	480	Chlorine
9/23/2000	Akutan Trident Seafoods	Akutan	685	Anhydrous Ammonia
2/18/2002	Trident Seafoods	Akutan	500	Anhydrous Ammonia
8/25/2003	Peter Pan Seafoods	King Cove	150	Chlorine
7/28/2004	M/V <i>Arctic Enterprise</i>	Akutan	100	Anhydrous Ammonia
7/30/2004	Trident Seafoods	Sand Point	155	Anhydrous Ammonia
12/22/2007	Unisea Inc	Dutch Harbor	18,007	Anhydrous Ammonia
5/9/2008	Saint Paul	Saint Paul	150	Anhydrous Ammonia
7/13/2010	Trident Seafoods	Akutan	190	Anhydrous Ammonia
10/14/2011	Alyeska Seafoods	Unalaska	126	Anhydrous Ammonia
10/22/2011	Bering Fisheries	Dutch Harbor	300	Anhydrous Ammonia
2/9/2012	Trident Seafoods	Saint Paul	3,885	Sodium Hypochlorite
5/10/2012	Fishing Company of Alaska	Bering Sea	500	Anhydrous Ammonia
6/20/2012	Bering Fisheries	Dutch Harbor	700	Anhydrous Ammonia
7/6/2012	F/V <i>Excellence</i>	Dutch Harbor	20,000	Anhydrous Ammonia
9/13/2013	Trident Seafoods	Saint Paul	1,600	Anhydrous Ammonia

# Aleutian Subarea

Total Spills: 683  
Total Volume: 469,439  
Average Spill Size: 687  
Average Spills/Year: 68  
Average Volume/Year: 46,944

## Top 5 Causes

Cause	Spills	Gallons
Human Error	38	342,282
Grounding	16	65,095
Overfill	191	13,970
Tank Failure	4	10,080
Valve Failure	30	6,089

## Top 5 Products

Product	Spills	Gallons
Bunker	4	360,432
Diesel	399	87,572
Aviation Fuel	31	7,046
Gasoline	16	5,539
Freon	1	2,000

## Top 5 Facility Types

Facility Type	Spills	Gallons
Vessel	320	412,204
Cannery	57	16,128
Noncrude Terminal	28	13,735
Air Transportation	41	8,119
Other	63	7,353

NOTE: The data summary above excludes spills reported in pounds and potential spills.



Shoreline: 6,500 miles  
Land Area: 7,300,000 acres or 11,400 square miles

The Aleutian Subarea includes the southern portion of the Alaska Peninsula as well as the Aleutian archipelago. The major islands in the region include Unimak, Unalaska, Umnak, Atka, Adak, Attu, and the Pribilof Islands of St. George and St. Paul. The region includes two Local Emergency Planning Districts (LEPD): the Aleutians East Borough LEPD and the Aleutian and Pribilof Islands LEPD. Major communities include the cities of Unalaska, Sand Point, and St. Paul. Industrial activity is limited to seafood processing, although Unalaska is a major port for freight into the region and a waypoint for freight shipments to Asia.

## Discernible Trends

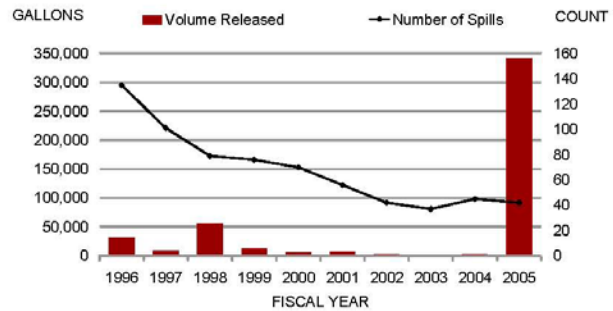
- The total number of spills in the Aleutian subarea appear to be on a general decline during this period.
- In terms of spill frequency related to the time of year, there appears to be a distinct period from October to January when a lesser number of spills occur. Further study may reveal that seasonal trends could be related to the fishery openers that occur along the Aleutian chain.
- Spills greater than 1,000 gallons in size were on a general decline following the November 1997 grounding of the M/V Kuroshima. However, the December 2004 grounding of the Selendang Ayu resulted in the huge spike in total volume spilled during that fiscal year.
- Spills from vessels were most common and accounted for 47% of the total number of spills, and 88% of the total volume spilled.
- Primary spill causes were relatively evenly distributed between Other causes (21%), Structural/Mechanical (33%), and Human Factors (42%). In terms of volume released, Human Factors causes resulted in 77% of the total volume released.
- Noncrude oil was the primary product spilled in 98% of the spills, and contributed to 99% of the total volume spilled.



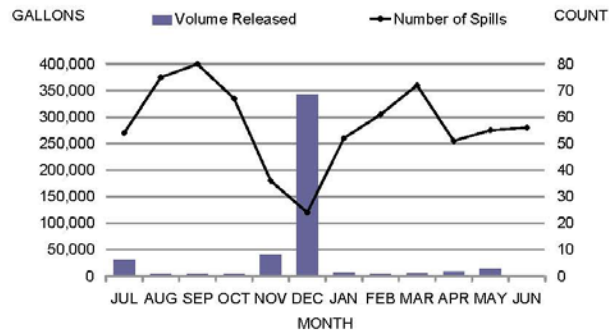
*M/V Kuroshima, aground at Summer Bay, Unalaska Island, November 1997.*

## Summary Oil and Hazardous Substance Spills by Subarea, July 1, 1995-June 30, 2005

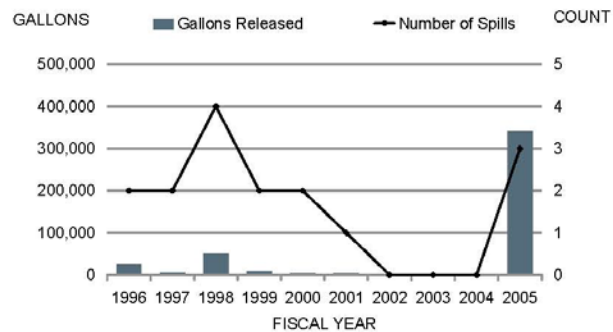
### All Spills by Fiscal Year



### All Spills by Month



### Spills >1,000 gallons

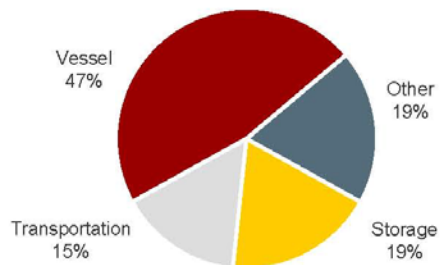


NOTE: Graphs do not include spills reported in pounds or potential spills.

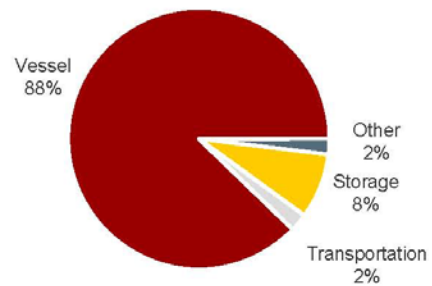


### Aleutian Subarea Spills by Facility Type

Number of Spills

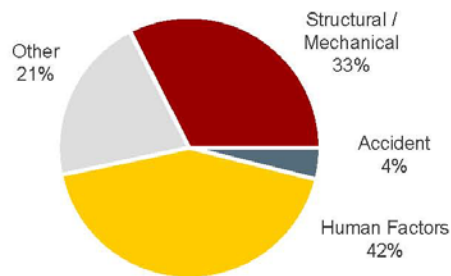


Gallons Released

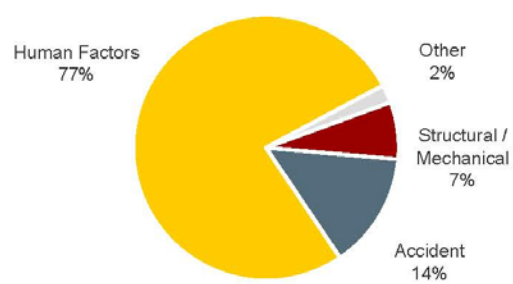


### Aleutian Subarea Spills by Cause

Number of Spills



Gallons Released



### Aleutian Subarea Spills by Product

Number of Spills



Gallons Released

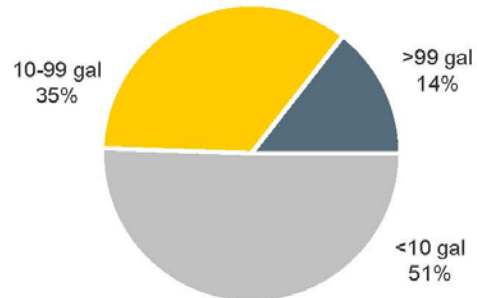


NOTE: Graphs do not include spills reported in pounds or potential spills.

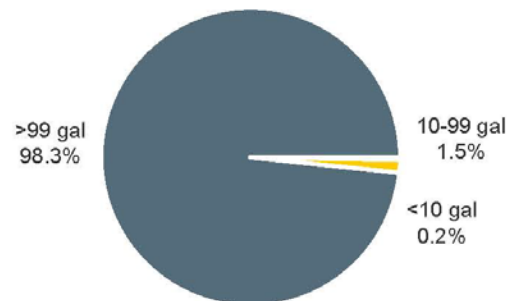
### Aleutian Subarea Spills by Size Class

- More than half of the spills reported during the 10-year period were less than 10 gallons in size.
- More than 98% of the total volume released was attributable to spills with a volume greater than 99 gallons.

Number of Spills



Gallons Released



NOTE: Graphs do not include spills reported in pounds or potential spills.



## Aleutian Subarea Spills at Regulated vs. Unregulated Facilities

Numerous oil facilities and vessels operating in Alaska are subject to Alaska's spill response planning and financial responsibility statutes. This section summarizes spills from:

- facilities and vessels required by statute to have an approved oil discharge prevention and contingency plan; and,
- non-tank vessels which are required to have an approved certificate of financial responsibility are also included.

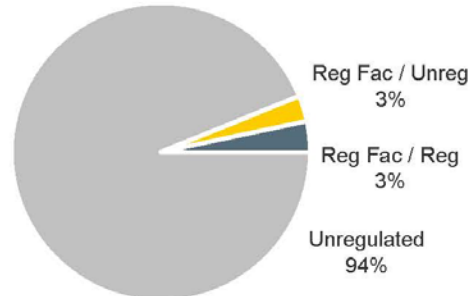
Spills from underground storage tanks are not included in this analysis.

Alaska's contingency planning requirements apply to specific aspects (components) of a facility's or vessel's operations. The analysis in this report distinguishes between spills from regulated versus unregulated components. Examples of spills from unregulated components include:

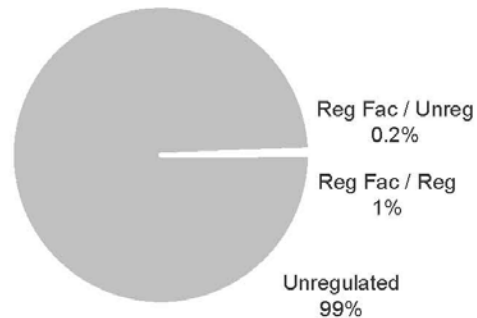
- a spill from a vehicle at a regulated facility;
- a spill from a fuel tank (below the regulatory threshold of 10,000 barrels) at a regulated facility

- More than 90% of the spills and nearly 100% of the total volume released during the 10-year period were from unregulated facilities, primarily Vessels.

Number of Spills

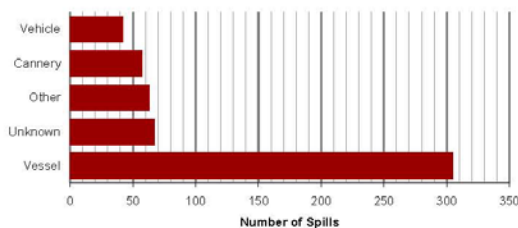


Gallons Released

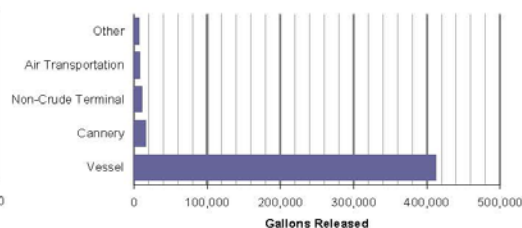


### Top Unregulated Facilities

Number of Spills



Gallons Released



NOTE: Graphs do not include spills reported in pounds or potential spills.

## Summary Oil and Hazardous Substance Spills by Subarea, July 1, 1995-June 30, 2005

### Major Spills in the Aleutian Subarea

Spill Date	Location	Spill Name	Facility Type	Product	Gallons
12/26/1988	East of Shumagin Islands	Tank Barge 283	Vessel	Diesel	2,041,662
12/8/2004	Unalaska Island, Skan Bay	M/V Selendang Ayu	Vessel	IFO 380, Diesel	335,732
3/5/1981	Attu Island	M/V Dae Rim	Vessel	Diesel	109,998
1/17/1989	Amchitka Island	T/B Foss 256	Vessel	Diesel	83,958
1/11/1989	Unalaska Island	M/V Chil Bo San	Vessel	Diesel	60,984
11/26/1997	Unalaska, Summer Bay	M/V Kuroshima	Vessel	Bunker	38,976
2/1/1988	Nikolski	F/V Alaska Star	Vessel	Diesel	35,952
12/10/1988	Akun Island	M/V Aoyagi Maru	Vessel	Diesel	31,962
2/27/1989	Dutch Harbor	M/V Swallow	Vessel	Diesel	29,988
12/10/1986	Adak	Adak Tank	Tank	JP-5	27,006
2/17/1988	Yunaska Island	F/V Captain Billy	Vessel	Diesel	16,002
12/3/1988	Shemya Island	F/V Opty	Vessel	Diesel	16,002
7/22/1995	Seguam Island	F/V Northern Wind	Vessel	Diesel	14,994
3/8/1987	Uluak Island	F/V Birgit	Vessel	Diesel	12,012
11/3/1988	Atka Island	F/V City of Seattle	Vessel	Diesel	12,012
5/6/1987	Uliaga Island	F/V Tae Woong	Vessel	Diesel	10,500
2/8/1991	Unalaska, Reese Bay	F/V Skagit Eagle	Vessel	Diesel	9,954
7/5/1995	Akutan	Trident Seafood	Cannery	Diesel	9,954
5/8/1999	Unamak Island	F/V Controller Bay	Vessel	Diesel	7,980
4/12/1993	Umnak Island	F/V Phoenix	Vessel	Diesel	6,972
10/15/1989	Chuginadak Island	F/V Polar Command	Vessel	Diesel	4,998
1/00/1990	Sand Point	Trident Seafood	Cannery	Diesel	4,998
2/20/1989	St. Paul Island	M/V Yard Arm Knot	Vessel	Diesel	3,500
3/00/1985	Akutan	Unknown	Unknown	Diesel	3,360
12/8/1986	St. Paul Island	F/V Jamie Lynn	Vessel	Diesel	3,000
8/13/1991	Atka Island	F/V Greenhope	Vessel	Diesel	2,982
5/11/2001	Cold Bay	F/V Kristen	Vessel	Diesel	2,982
5/11/1987	North of Unimak Pass	Tank Vessel	Vessel	Diesel	2,674
10/24/1996	Tanaga Island	F/V Rebecca B	Vessel	Diesel	1,512
2/19/1997	Akun Island	F/V Lisa Jo	Vessel	Diesel	1,176
8/10/1995	Akutan	Akutan	Cannery	Fish Oil	1,008
9/10/2000	False Pass	Peter Pan	Cannery	Diesel	1,008

#### Data Sources:

Department of Environmental Conservation

US Coast Guard

NOAA

Aleutian Subarea Contingency Plan for Oil and Hazardous Substance Discharges/Releases, September 1999

### Contingency Plan Facilities in the Aleutian Subarea

Facility Name	Facility Type
Island Tug and Barge, Ltd. Barges <sup>(1)</sup>	Barge
Crowley Barges <sup>(1)</sup>	Barge
Sea Coast Transportation Barges <sup>(1)</sup>	Barge
Sirius Maritime Barges	Barge
Sause Brothers, Inc -- Klamath	Barge
Spot Charter - Adak Petroleum LLC	Tank Vessel
Fictitious Spot Charter Tanker - DW	Tank Vessel
Crowley Tanker Vessel	Tank Vessel
Chembulk New Orleans	Tank Vessel
Renda	Tank Vessel
Peter Pan Seafoods King Cove Shore Plant	Noncrude Terminal
Trident Akutan Bulk Fuel Storage Facility	Noncrude Terminal
Frosty Fuel Cold Bay Bulk Plant	Noncrude Terminal
City of St. Paul Bulk Fuel Storage	Noncrude Terminal
Delta Western - St. Paul Delta Fuel	Noncrude Terminal
USAF Eareckson Air Station	Noncrude Terminal
Offshore Systems, Inc - Dutch Harbor	Noncrude Terminal
Trident Seafood Sand Point Fuel Plant	Noncrude Terminal
Delta Western Dutch Harbor Tank Farm	Noncrude Terminal
North Pacific Fuel - Ballyhoo	Noncrude Terminal
North Pacific Fuel - Capt. Bay Tank Farm	Noncrude Terminal
North Pacific Fuel - Resoff Tank Farm	Noncrude Terminal
North Pacific Fuel - Westward Seafoods	Noncrude Terminal
Delta Western - St. George Delta Fuel	Noncrude Terminal
Adak Bulk Fuel Facility-Aleut Corp	Noncrude Terminal

NOTES:

(1) Authorized to operate statewide

### Active Contaminated Sites in the Aleutian Subarea

This table summarizes the number of active contaminated site cleanup projects in the Aleutian subarea as of August 20, 2007.

Primary Contaminant	Sites	%
Petroleum	185	76%
Hazardous Substances	59	24%
<b>Total</b>	<b>244</b>	

## Aleutian Subarea Spill Preparedness and Response Initiatives

### Response Corps and Equipment Depots

Community	CRSA	Conex	Nearshore	Other Equipment
Dutch Harbor	■	●	▲	
King Cove	■	●		

### Aleutian Island Risk Assessment

DEC, the U.S. Coast Guard, and the Transportation Research Board of the National Academies have executed a memorandum of agreement with the goal of establishing a study framework for conducting a large-scale comprehensive maritime transportation risk assessment.

### Vessel Traffic Study

DEC (thru a contractor) produced the initial Vessel Traffic in the Aleutian Subarea report in April 2005. This vessel traffic study was subsequently updated in September 2006. The report is available on the DEC website at:

[http://www.dec.state.ak.us/spar/perp/docs/060920vesselreport\\_s.pdf](http://www.dec.state.ak.us/spar/perp/docs/060920vesselreport_s.pdf)

### Ports and Waterway Safety Assessment (PAWSA)

The initial PAWSA meeting for the Aleutians was held in July 2006. The PAWSA work group will focus primarily on vessel traffic through the Unimak Pass area as this is an area of high concentrations of vessel traffic and hence the location of greatest concern for the Coast Guard and the State of Alaska. Further details on the PAWSA are also available on the DEC website at:

[http://www.dec.state.ak.us/spar/perp/ai\\_risk/ai\\_risk.htm](http://www.dec.state.ak.us/spar/perp/ai_risk/ai_risk.htm)

### Arctic Marine Shipping Assessment (AMSA)

DEC staff is also assisting with the AMSA initiative which is led by the U.S. Arctic Research Council at the request of the eight Arctic member nations. This study will further research arctic vessel traffic including traffic through the Aleutian Islands.

### Aleutian Potential Places of Refuge (PPOR) and Geographic Response Strategies (GRS) Development

DEC is sponsoring both of these initiatives which commenced in January 2007. The PPOR project will identify approximately 70 different locations where a vessel in distress could seek shelter along the Aleutian chain. The GRS project provides detailed, pre-planned spill response tactics for protecting extremely sensitive resources. Due to funding limitations, DEC is initially focusing its efforts on developing GRS for the Unalaska Island and vicinity. As funding becomes available, DEC will proceed with developing GRS for the remainder of the Aleutians. DEC website-<http://www.dec.state.ak.us/spar/perp/aippor/home.htm>

### Unalaska/Dutch Harbor Disabled Vessel Workgroup

Following the near grounding of the Salica Frigo on March 9, 2007, the Mayor of Unalaska convened an ad-hoc workgroup to discuss ways to enhance the ability of local tug assets to respond to a distressed vessel in need of assistance due to engine failure, rudder failure, or any other failure which compromises the safe navigation of a vessel. DEC is a participating agency and has committed to purchasing an emergency towing system (ETS) for vessels greater than 50,000 DWT and the City of Unalaska is purchasing an ETS for vessels less than 50,000 DWT. The goal of the system design is to make the system deployable from a rescue vessel or deployable from a disabled vessel. The towing systems will be located in Unalaska. DEC project website: <http://www.dec.state.ak.us/spar/perp/aiets/home.htm>

### Aleutian Subarea Contingency Plan for Oil and Hazardous Substance Spills and Releases

The current plan is dated September 1999, and is undergoing revision. The plan pre-dates the M/V Selendang Ayu incident, and the update will include improvements to the entire plan based on the information and lessons learned from that incident. Additionally, the GRS and PPOR currently under development, along with the vessel traffic study will be incorporated into the plan. The target date for publishing the revision to the plan is Spring 2008.

## **D. OIL FATE AND GENERAL RISK ASSESSMENT**

### **1. Fate of Spilled Oil**

Weathering is a combination of chemical and physical processes that change the physical properties and composition of spilled oil. These processes include evaporation, oxidation, biodegradation, emulsification, dispersion, dissolution, and sedimentation. Below are definitions of these processes and how they relate to oil spills.

- Evaporation occurs when substances are converted from liquid state to vapor. During an oil spill, lighter components can evaporate into the atmosphere, leaving behind heavier components. Evaporation rates depend on the composition of the oil and environmental factors like wind, waves, temperature, currents, etc. For example, lighter refined products, such as gasoline, tend to evaporate very quickly because they have a higher proportion of lighter compounds. Heavier oils, like bunker oil, contain relatively few light compounds and leave viscous residues, composed of heavier compounds.
- Oxidation is a chemical reaction between two substances, which results in loss of electrons from one of the substances. This chemical reaction can take place between spilled oil and oxygen in the air or water. This reaction can produce water soluble compounds that can dissolve or form persistent compounds called tars. Oxidation of oil is a very slow process but can be enhanced by sunlight.
- Biodegradation occurs when microorganisms, such as bacteria, fungi, and yeast, break down a substance by feeding on it. Seawater contains a range of microorganisms that can either partially or completely degrade oil. Nutrient levels, water temperature and oxygen availability can all affect biodegradation, which tends to be quicker in warmer environments.
- Emulsification is a process where small droplets of one liquid become suspended in another liquid. During a spill, emulsification takes place when strong currents or waves suspend water droplets in oil. Water-in-oil emulsions are frequently called "mousse" and are more persistent than the original oil.
- Dispersion is the break up and diffusion of substances from their original source. In an oil spill, turbulent seas can break oil into various sized droplets and mix them into the water column. Smaller droplets can stay suspended while larger droplets tend to resurface, creating a secondary slick. The amount of oil dispersed depends on the oil's chemical and physical properties and the sea state. For example, lower viscosity oils such as diesel, have higher dispersion rates in rough seas. Chemical dispersants may be used to enhance dispersion.
- Dissolution is the process of dissolving one substance in another. Many oils contain light aromatic hydrocarbons, like benzene and toluene, which are water soluble. During a spill, these compounds readily dissolve in water or evaporate into air, which is faster than dissolution.
- Sedimentation is a process where spilled oil chemically binds with, or adheres to, particulates in the water column, creating a density greater than the original oil. If the density of oil/particulate compounds becomes greater than water, particles will settle out of the water column. Sedimentation is much more common in shallow, nearshore areas because of the greater amount of suspended particulates.

### **2. General Risk Assessment and Climatological Data**

The following information (graphs and illustrations) were extracted from a NOAA provided at the National Academy of Science Aleutian Islands Oil Spill Risk Assessment Scoping meeting held in

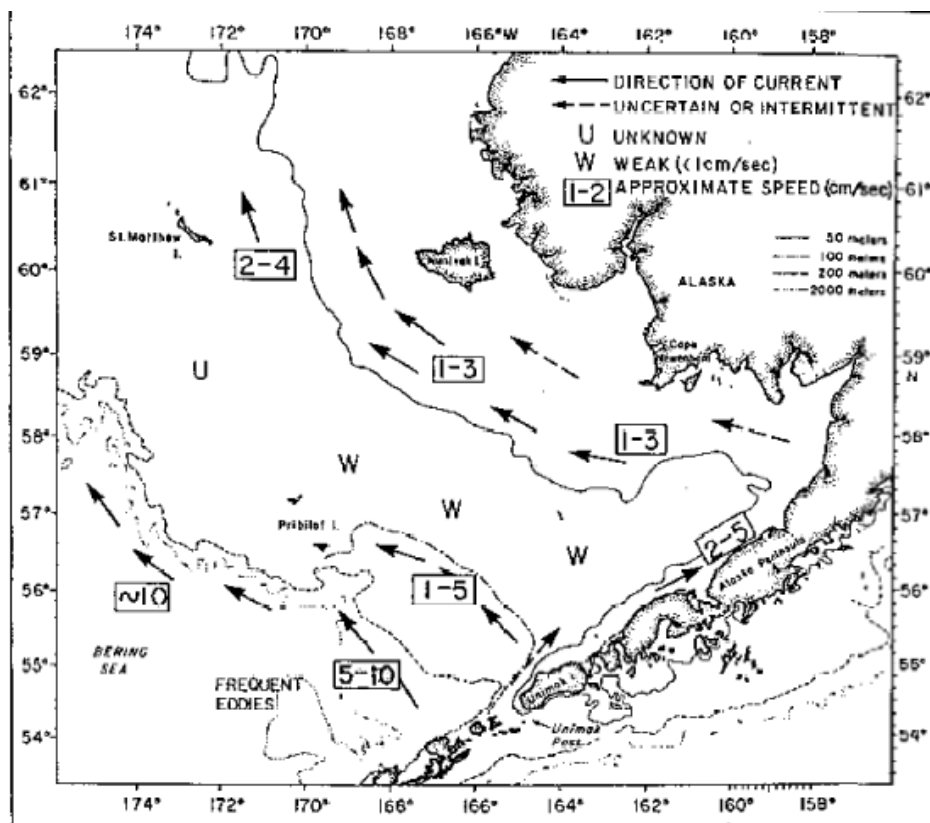
Anchorage on October 29-30, 2007.

### 3. Wind, Ice and Current Conditions

The following information gives an overview of wind, tide and current conditions in the southern Bering Sea. Much of the available data is general in nature and should be supplemented by area-specific updates and information from local residents. Included in this section are maps of net surface currents. In addition, if the user obtains a current edition of the NOAA tide current tables for the Pacific Coast of North America, it will be possible to predict the times of ebb and flood tides for several points within the Bering Sea.

#### a. Current Data:

**North Aleutian Shelf:** The primary flow of water into the Bering Sea originates at Unimak Pass. The source of this flow is the Alaskan Coastal Current, from south of the Aleutians. Typically, this current flows to the northeast into Bristol Bay in the direction of the prevailing wind. At times, the north Aleutian coastal current will undergo a reversal in direction due to changes in the large scale and mesoscale wind direction.



**Estimated mean surface circulation for the summer in the eastern Bering Sea.**

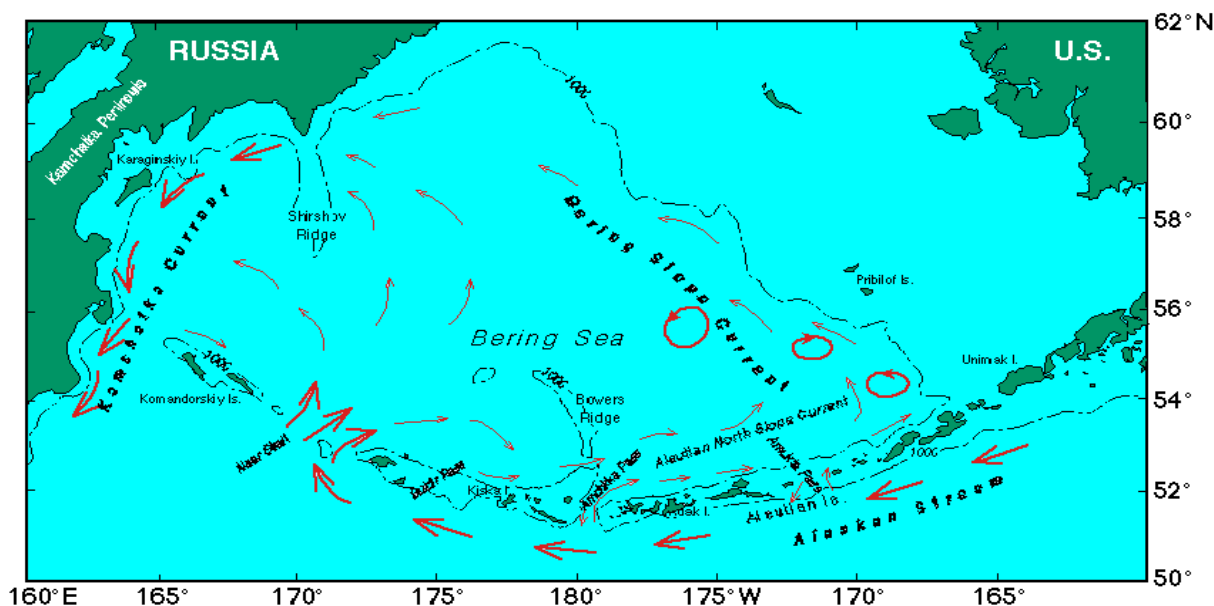
Schumacher, J.D. and T.H. Kinder; Low-Frequency Current Regimes over the Bering Sea Shelf. J. Physical Ocn. Vol. 13, No. 4, April 1983.

Central Bering: West and northwest of the North Aleutian Basin and Yukon Delta lies St. George Basin, the Central Bering Sea, and still further west, the Navarin Basin. Circulation in these regions is not as



well understood as in the coastal basins. Data is site-specific and sporadic over decades. No consistent flow patterns have emerged as representative of the regional circulation.

**Aleutian Islands:** The accompanying current diagram shows the Alaska coastal current which joins the Alaska stream in flowing west along the southern boundary of the Aleutian Islands. Most of the exchange of water through the Aleutian passes is from the North Pacific ocean to the Bering Sea during both summer and winter, although local reversals are known to occur.



b. **Tidal Current:** Although tidally induced currents are factors in determining net surface currents, tidal currents are not usually important in long distance transport since they are oscillatory in nature. Wind and freshwater runoff are additional variables which must be taken into account when estimating spill trajectories. In some cases, tidal currents will be counteracted by these variables and will not be the deciding factor in spill transport.

c. **Spill Trajectory:** The trajectory of a spill is the result of the interaction of these several forces. This interaction is often complex and difficult to predict. NOAA is capable of generating sophisticated spill trajectory models and has had considerable experience in this area. Requests for this service should be directed to:



Scientific Support Coordinator  
NOAA Emergency Response Division  
49000 Army Guard Road  
G Wind, Room 216  
JBER, Alaska 99505  
Phone: 428-4143

d. **Ice:** In the Bering Sea, the sea ice generally begins as fast ice formation along the shores of the Seward and Chukotsk peninsulas in October. As the season progresses and waters in the more open portions of the Bering Sea cool, the pack ice generally begins its seasonal southward formation in November. An estimated 97% of the ice in the Bering Sea is formed within the Bering Sea; very little is

transported south through the Bering Strait. During periods of increasing ice and prevailing northerly winds, the ice apparently is generated and moves southward with the wind at as much as 1 knot 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 and from year to year. No seasonal ice develops along the Aleutian Islands, and there is a 25% probability that the Bering Sea ice edge may extend south to the Pribilof Islands during the months of February through April.

Structural icing of ships and port facilities due mostly to freezing ocean spray during the winter can cause problems.

e. Data Sources:

- Hood and Zimmerman (eds). Gulf of Alaska: Physical Environment and Biological Resource.
- LaBelle, J.C. and J.L. Wise. 1983. Alaska Marine Ice Atlas.
- National Climatic Data Center (NDC) and Arctic Environmental Information and Data Center (AEIDC). 1988. Climatic Atlas, Volume II: Bering Sea. (wind roses, tidal range data and map)
- U.S. Department of Commerce (NOAA). 1989. Tide Current Tables 1990: Pacific Coast of North America and Asia. (tidal current data and information).
- Alaska Oceanographic Circulation Diagrams and Graphics



## BACKGROUND: PART FOUR - ABBREVIATIONS & ACRONYMS

AAC	Alaska Administrative Code
ACA	Area Command Authority
ACFT	Aircraft
ACP	Area Contingency Plan
ACS	Alaska Clean Seas (North Slope industry cooperative)
ADCCED	Alaska Department of Commerce, Community and Economic Development
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADMVA	Alaska Department of Military and Veterans Affairs
ADNR	Alaska Department of Natural Resources
ADOT&PF	Alaska Department of Transportation & Public Facilities, also as ADOTPF
AFB	Air Force Base
AIMS	Alaska Incident Management System Guide
AIR	Air Operations
AKNG	Alaska National Guard
ALCOM	Alaska Command
ALMR	Alaska Land Mobile Radio
AMHS	Alaska Marine Highway System (ADOT&PF)
ANCSA	Alaska Native Claims Settlement Act
ANS or ANSC	Alaska North Slope Crude oil
AOO	Alaska Operation Office (EPA)
AP	Associated Press
APSC	Alyeska Pipeline Service Company
ARRT	Alaska Regional Response Team
ATON	Aids to Navigation
AS	Alaska Statue, also Air Station (USAF)
ASAP	As soon as possible
AST	Alaska State TroopersBBLS                      Barrels
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BOA	Basic Ordering Agreement
BOEM	Bureau of Ocean Energy Management
BOPD	Barrels of Oil per Day
BSEE	Bureau of Safety and Environmental Enforcement
CAMEO	Computer-Aided Management of Emergency Operations
CART	Central Alaska Response Team (ADEC)
CCGD 17	Commander, Coast Guard District 17
CEC	Community Emergency Coordinator
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
CISPRI	Cook Inlet Spill Prevention and Response Inc. (industry cooperative)
CMT	Crisis Management Team
COM	Communications equipment/capabilities
COMDTINST	Commandant Instruction (USCG)

COTP	Captain of the Port (USCG)
CP	Command Post
C-Plan	Contingency Plan
CTAG	Cultural Technical Advisory Group
CUL	Cultural Resources
CWA	Clean Water Act
DAA	Documentation/Administrative Assistance
DHS	United States Department of Homeland Security
DHSEM	Division of Homeland Security and Emergency Management (division under ADMVA)
DOC	United States Department of Commerce
DOD	United States Department of Defense
DOE	United States Department of Energy
DOI	United States Department of the Interior
DRAT	District Response Advisory Team (USCG)
DRG	District Response Group (USCG)
DWT	Dead weight tonnage
ECRT	Emergency Communications Response Team (ADMVA)
EEZ	Exclusive Economic Zone
EMS	Emergency Medical Services
ENV	Environmental Unit
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ESA	Environmentally Sensitive Area
ESI	Environmental Sensitivity Index
ETS	Emergency Towing System
F/V	Fishing Vessel
FAA	Federal Aviation Administration
FDA	Food and Drug Administration
FIN	Finance
FIR	Fire Protection/fire fighting
FLIP	Flight Information Publication
FOG	Field Operations Guide
FOSC	Federal On-Scene Coordinator
FPN	Federal Pollution Number
FRP	Facility Response Plan
FWPCA	Federal Water Pollution Control Act
GIS	Geographic Information System
GRS	Geographic Response Strategies
GSA	General Services Administration
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HQ	Headquarters
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System

IDLH	Immediate Danger to Life and Health
IMH	Incident Management Handbook (USCG)
IMT	Incident Management Team
INMARSAT	International Maritime Satellite Organization
JPO	Joint Pipeline Office
LAT	Latitude
LEG	Legal
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LERP	Local Emergency Response Plan
LNG	Liquefied Natural Gas
LO	Liaison Officer
LONG	Longitude
LOSC	Local On-Scene Coordinator
LRRS	Long Range Radar Station
M/V	Motor Vessel
MAC	Multiagency Coordination Committee
MAP	Mapping
MAR CH	Marine Channel
MED	Medical Support/Health Care
MESA	Most Environmentally Sensitive Area
MLC	Maintenance and Logistics Command (USCG Pacific Area)
MLT	Municipal Lands Trustee Program
MOA	Memoranda of Agreement
MOU	Memoranda of Understanding
MSD	Marine Safety Detachment (USCG)
MSO	Marine Safety Office (USCG)
MSRC	Marine Spill Response Corp. (national industry cooperative)
NART	Northern Alaska Response Team (ADEC)
NAVSUPSALV	U.S. Navy Superintendent of Salvage
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NIMS	National Incident Management System
NIIMS	National Interagency Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOTAMS	Notice to All Mariners; also, Notice to Airmen
NPDES	National Pollution Discharge Elimination System
NPFC	National Pollution Fund Center
NPS	National Park Service
NRC	National Response Center
NRT	National Response Team
NRDA	(Federal/State) Natural Resource Damage Assessment
NSF	National Strike Force
NSFCC	National Strike Force Coordinating Center
NWR	NOAA Weather Radio; also National Wildlife Refuge (USFWS)
NWS	National Weather Service

OHMSETT	Oil and Hazardous Material Simulated Environment Test Tank
OOD	Duty Officer or Officer On Duty
OPA 90	Oil Pollution Act of 1990
OPCEN	Operations Center
OPS	General Response Operations
OSC	On-Scene Coordinator
OSHA	Occupational Health and Safety Administration
OSLTF	Oil Spill Liability Trust Fund
OSRO	Oil Spill Response Office
O/S	On-Scene
PERP	Prevention and Emergency Response Program (ADEC)
PIAT	Public Information Assist Team
PIO	Public Information Officer
PLN	General Planning Operations
POLREP	Pollution Report (USCG)
PPE	Personal Protective Equipment
PPOR	Potential Places of Refuge
PPP	Seafood Processor Protection Plans
RAC	Response Action Contractor
RCC	Rescue Coordination Center
RCAC	Regional Citizens Advisory Council
RCRA	Resource Conservation and Recovery Act of 1978
RMAC	Regional Multi-Agency Coordination Committee
RP	Responsible Party
RPOSC	Responsible Party On-Scene Coordinator
RPD	Recovery, Protection and Decontamination
RQ	Reportable Quantity
RRT	Regional Response Team
RSC	Regional Stakeholder Committee
RV	Recreation Vehicle
SAR	Search and Rescue
SART	Southeast Alaska Response Team (ADEC)
SCAT	Shoreline Cleanup Assessment Teams
SCBA	Self-Contained Breathing Apparatus
SCP	Subarea Contingency Plan
SDS	Safety Data Sheet
SEAPRO	Southeast Alaska Petroleum Resource Organization Inc.
SEC	Security
SHPO	State Historic Preservation Officer (ADNR)
SERVS	Ship Escort Response Vessel Service (Alyeska)
SITREP	Situation Report (ADEC)
SONS	Spill of National Significance
SOSC	State-On Scene Coordinator
SPAR	Spill Prevention and Response Division
SSC	Scientific Support Coordinator (NOAA)
STORMS	Standard Oil Spill Response Management System
T/V	Tank Vessel
TA	Trajectory Analysis

TAPS	Trans Alaska Pipeline System
TPO	Tribal Police Officer
UC	Unified Command
USAF	United States Air Force
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VIRS	Visual Information Response System
VOSS	Vessel of Opportunity Skimming System
VPO	Village Police Officer
VSPO	Village Public Safety Officer
VTs	Vessel Traffic Separation System/Scheme
WRR	Wildlife Protection/Care/Rehabilitation/Recovery
WX	Weather