The Aleutian Islands and Lower Alaska Peninsula:

Oceanographic Conditions and NOAA's Oil Spill Response History during 1981-1999

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ALEUTIAN ISLANDS & LOWER ALASKA PENINSULA
Oceanographic Conditions
and
NOAA's Nineteen-Year Oil Spill Response History
for the years 1981-1999.

Introduction

Formed by the tumultuous collision of the Pacific and North American plates, the Aleutian Island chain consists of about 75 volcanic islands extending westward over 1000 miles from the southwestern tip of the Alaska Peninsula. Their location on the globe makes them both the westernmost and easternmost points of land in the United States, in addition to being the southernmost land masses in Alaska. Of most consequence to human activity are the constancy of inclement weather in the Aleutians and its inevitable effects on the copious maritime traffic that frequents these waters. Droves of fishing vessels and processors are attracted to the rich fishing grounds of the Bering Sea, and freighters and tankers tangle with the Aleutian williwaws on their great circle route between ports in the Far East and those along the west coast of the United States and Canada.

This report documents the oceanographic conditions that characterize the Aleutian Island chain through the southwestern end of the Alaska Peninsula (northeast to Port Moller and the Shumagin Islands) and the 41 oil spill incidents between 1981 and 1999 for which the U.S. Coast Guard requested assistance from NOAA HAZMAT.

Oceanographic Conditions

It has long been recognized that a cyclonic gyre characterizes the ocean circulation in the North Pacific Ocean. The phenomenon drives the Alaska Current northwards along the west coast of Canada and SE Alaska and then becomes the Alaskan stream as it follows the Continental Shelf break westward past Kodiak Island and along the southern side of the Aleutian Islands (**Figure 1**;

Reed & Schumacher 1986). At this point, a combination of the coriolis force and deep passes between Aleutian Islands directs the Alaskan Stream into the Bering Sea. Figure 2 presents a synopsis of the upper-ocean circulation of the Alaskan Stream, of the deep Bering Sea basin, and of the water exchange through the Aleutian Island passes is shown in Figure 2 (Reed & Stabeno 1999). Inflow of the Alaskan Steam through various passes, especially Near Strait, drives the cyclonic circulation over the Bering Sea basin. The inflow through the Aleutian Island passes creates an eastward flow along the north side of the Aleutians and is known as the Aleutian North Slope Current (ANSC). This current provides the source for the Bering Slope Current and has distinct characteristics. Sill depth through Near Strait is ≈2000 meters, and inflow of the Alaskan Stream through this passage provides most of the mass needed for upper-ocean circulation in the western Bering Sea. Other passes that appear to direct the Alaskan Stream north through the Aleutians and contribute to the ANSC are Buldir Pass (sill depth of ≈600 m), Amchitka Pass (sill depth of ≈), and Amukta Pass (sill depth of 300—400 m).

Representative tidal height conditions from Cold Bay (on the SW Alaskan Peninsula) to Attu Island at the western end of the Aleutians are illustrated in Figures 3-6. Tides along the SW end of the Alaskan Peninsula are distinctly semi-diurnal (**Figure 3**) while from Unimak Island westward through the entire Aleutian chain the tides are distinctly mixed, being a combination of diurnal and semi-diurnal (**Figures 4-6**). The maximum tidal range at Cold Bay is around 8 feet while the entire Aleutian Island chain has a co-range of only around 4 feet.

NOAA's Spill Response History in the Aleutian Islands and Lower Alaska Peninsula

Table 1 contains the basic data on the 29 incidents.from 1981 to 1999, for which oil was actually released in the water and for which the U.S. Coast Guard requested NOAA Hazmat assistance. This is followed by **Table 2** which lists the 12 incidents which, due to rapid response, vigilance, and serendipity

no oil was released into the water even though a serious threat existed. The actual location of all of these incidents is graphically depicted in **Figures 7-8**, maps of the subject area. Clusters seem to logically occur near the two busiest ports in the area Dutch Harbor and Cold Bay—for which blowups have been provided to delineate the incidents.

Figure 9 shows the volume of oil released in all 29 incidents. The largest release, 110,000 gallons, occurred in 1981 when the M/V *Dae Rim* grounded at Attu Island. Unfortunately, this was several years before the author's employment with NOAA and little information has survived about this incident. The average amount released per incident was around 23,000 gallons, and most likely the release was diesel from a fishing boat, as illustrated in **Figures 10 & 11** which reveal that 25 of the 41 actual incidents involved the release of diesel fuel and 28 of the 41 incidents involved fishing boats. .

Because many of the incidents in the Aleutians have been the result of bad weather—e.g., gale-force winds drive the vessel onto a rocky beach—no response has been possible or necessary. The diesel from the fishing boat rapidly evaporates and/or is rapidly dispersed by the high winds. However, the remoteness of the Aleutians has led to the rather frequent use of the in-situ burning technique, not of the oil on the water, but of the oil in the hull of the vessel. On three occasions (F/V *Birgit*, F/V *Rae Woong*, and M/V *Aoyagi Maru*) the vessels have grounded with a large amount of fuel remaining in the hull fuel tanks. Rather than performing a dangerous and expensive lightering mission, the Coast Guard has made the decision to detonate the remaining fuel in the vessel, to eliminate the possibility of further oil pollution to the marine environment.

To date, the largest, most expensive, and most prolonged spill response in the Aleutians was the M/V *Kuroshima* which released about 116,000 gals. of IFO-380. This spill was adjacent to the communities of Dutch Harbor and Unalaska, which made the grounded vessel and oil pollution easily accessible. Because this spill affected biological resources, human subsistence, and

recreational and archeological resources, a full cleanup effort was mounted lasting more than 1 year.

As a result of the small diesel spills that are commonplace in Alaska, NOAA HAZMAT prepared a factsheet entitled, "***Small Diesel Spills in Marine Waters.***" That fact sheet, along with associated graphics, follows Figure 11 in this report. Because No. 6 Fuel Oil (Bunker C) and IFO spills are both common among the cargo and fish-processing vessels that frequent the Aleutian maritime trade, factsheets and graphics for those as well.

In the set of reference documents at the end of this report, all the NOAA incident reports for actual and potential releases from 1986 through 1999. These reports cover the geographic area from Port Moller on the Alaska Peninsula through the entire Aleutian Island chain. However, no reports were available for the 1981 Attu Island spill and the 1985 Akutan Island spill.

Bibliography

Reed, R.K., & P.J. Stabeno. 1999. The Aleutian North Slope Current. *In* Loughlin, T.R., & K. Ohtani (eds.), Dynamics of the Bering Sea. Fairbanks: University of Alaska Sea Grant, p. 177-191.

Reed, R.K., & J.D. Schumacher. 1986. The physical oceanography. *In* Hood, D.W., & S.T.Z. Zimmerman (eds.), The Gulf of Alaska, physical environment and biological resources. Minerals Management Service OCS study, MMS 86-0095, p. 57-75.

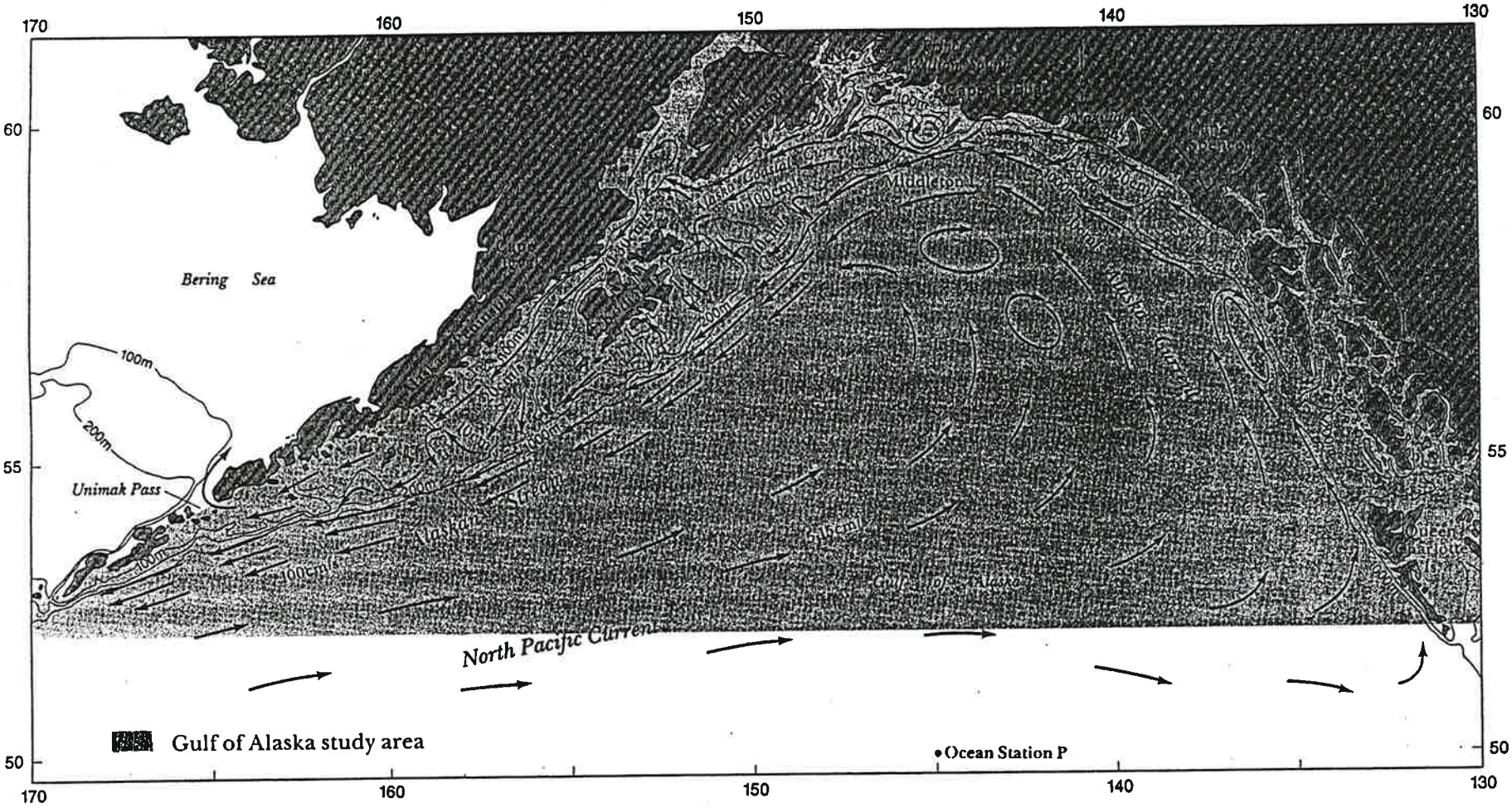


Figure 1: Schematic representation of the major currents in the Gulf of Alaska. The depth contours are from International Hydrographic Office Chart 5.03.

Reed and Schumacher, 1986

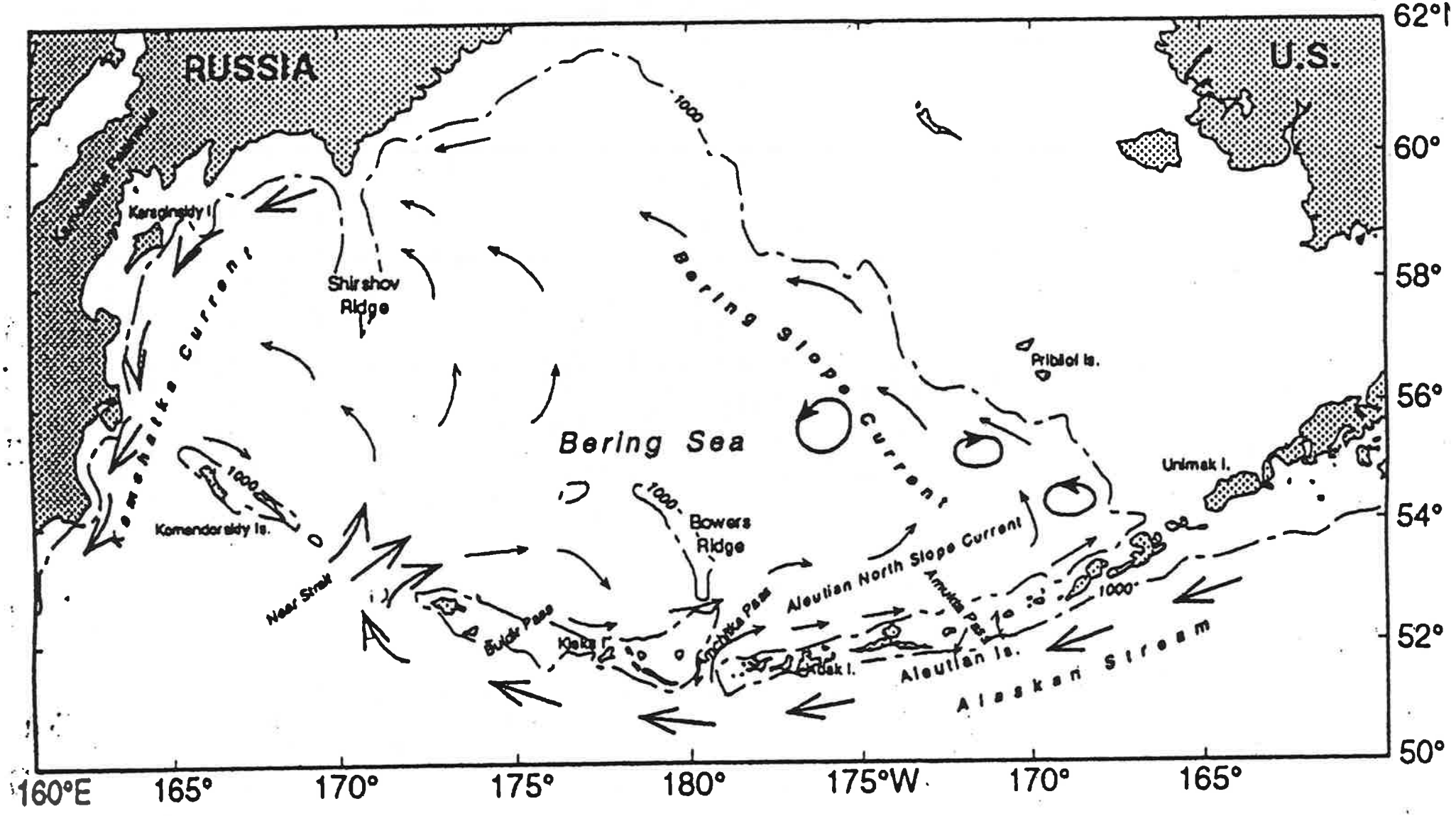


Figure 2: *Schematic upper-ocean circulation over and near the Bering Sea basin. Various geographic features and the 1,000-m isobath are shown.*

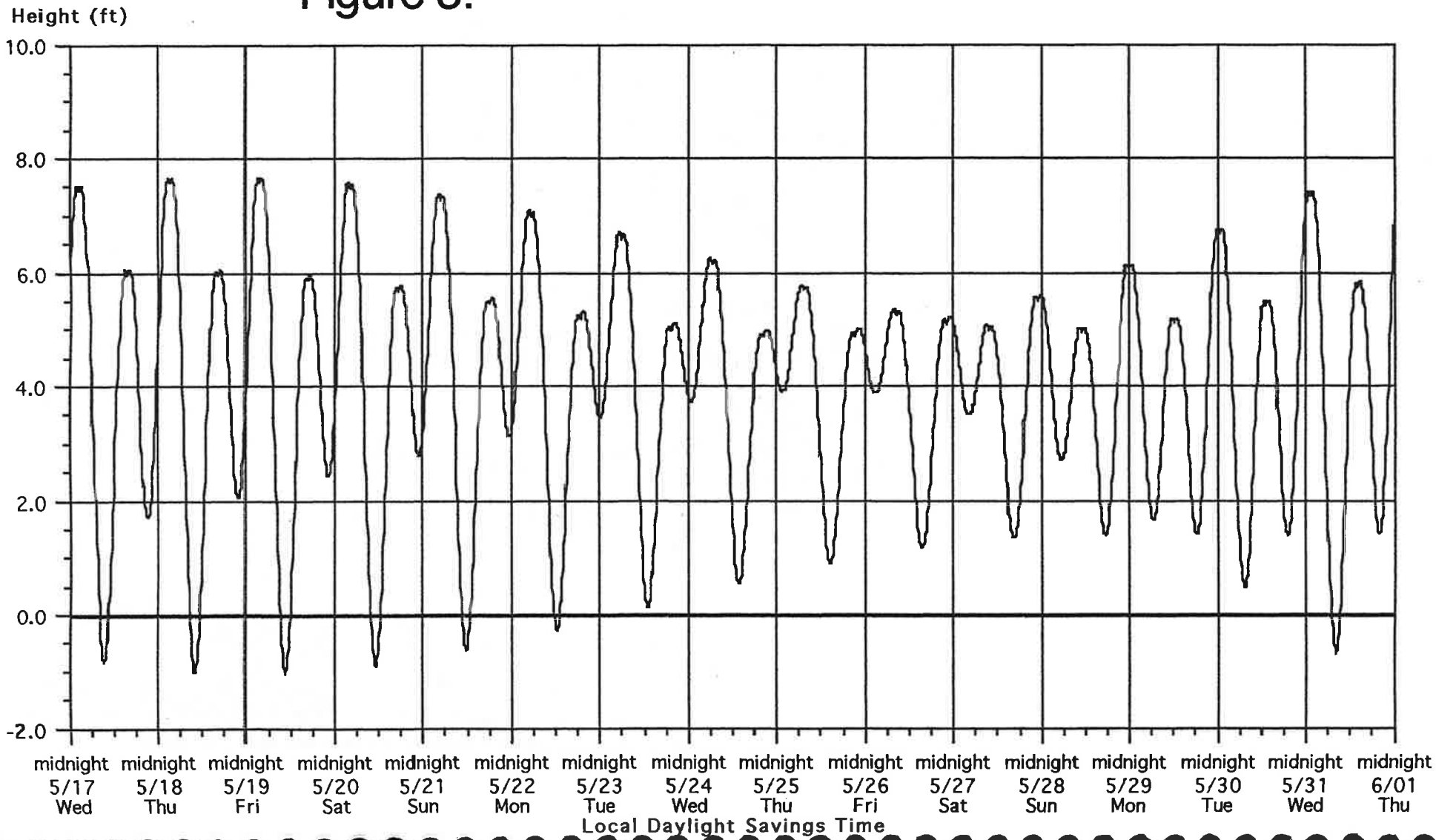
Reed and Stabeno, 1999

Cold Bay Shio Version 1.0

Tidal heights at Cold Bay, Alaska Peninsula
Station No. 2145 Latitude: 55°12.00' Longitude: 162°42.00'
Based on Kodiak

From Wed 05/17/2000 to Wed 05/31/2000 Local Daylight Savings Time

Figure 3: Heights

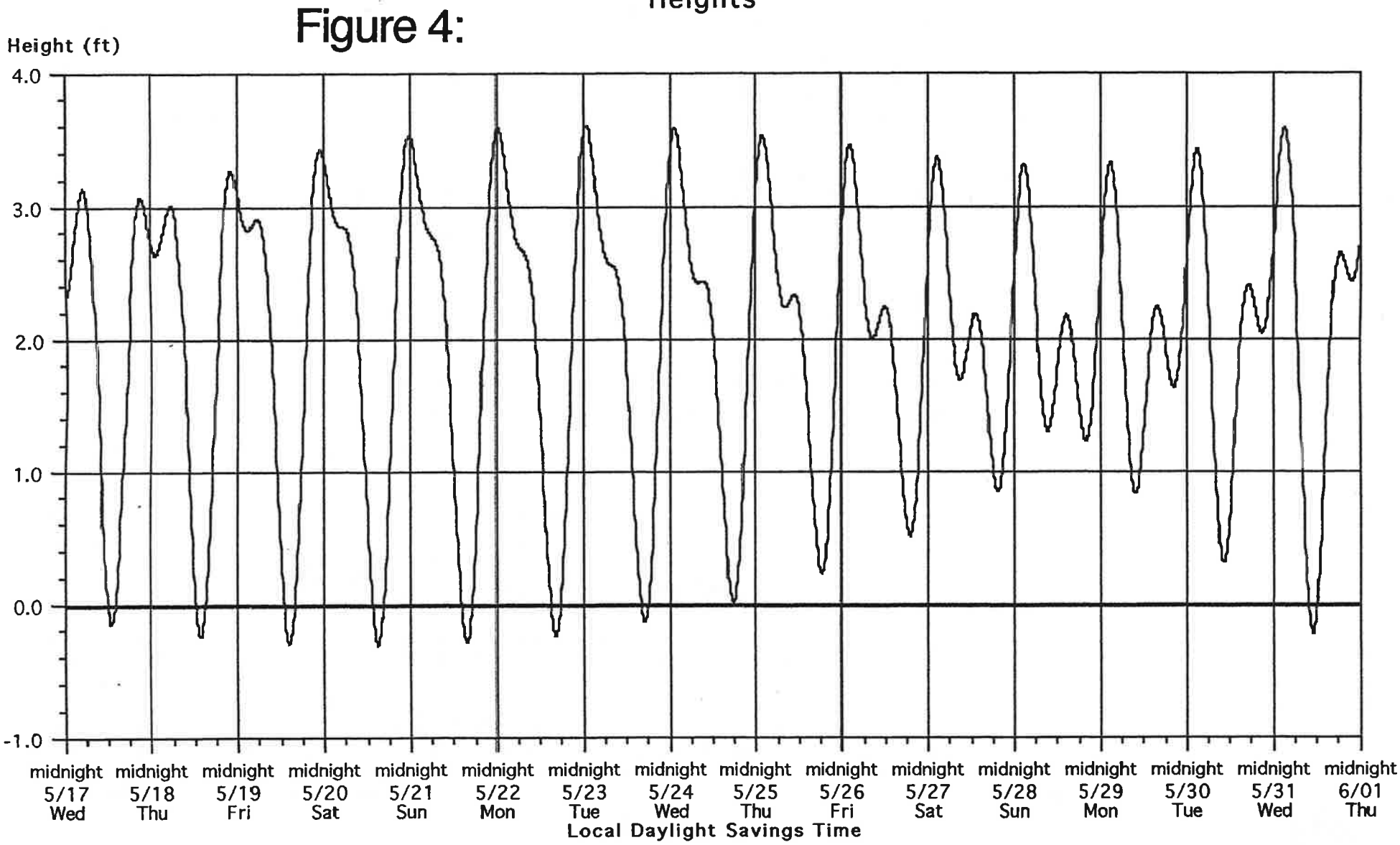


UNALASKA Shio Version 1.0

Tidal heights at UNALASKA, Unalaska Island, Aleutian Islands
Station No. 2181 Latitude: 53°53.00' Longitude: 166°32.00'
Based on Unalaska

From Wed 05/17/2000 to Wed 05/31/2000 Local Daylight Savings Time

Figure 4:

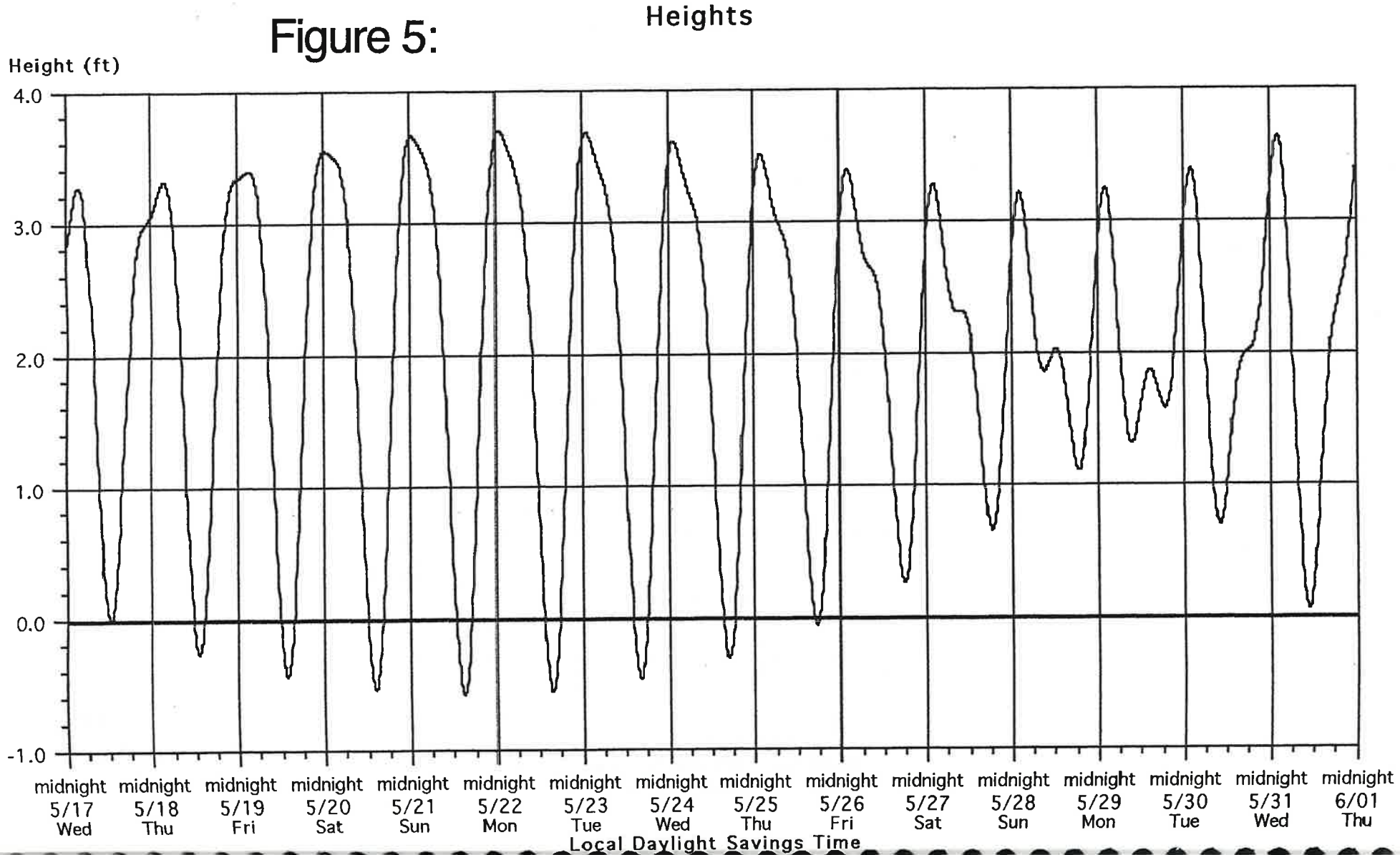


SWEEPER COVE, Kuluk Bay Shio Version 1.0

Tidal heights at SWEEPER COVE, Kuluk Bay, Adak Island, Aleutian Islands
Station No. 2263 Latitude: 51°51.00' Longitude: 176°39.00'
Based on Sweeper Cove

From Wed 05/17/2000 to Wed 05/31/2000 Local Daylight Savings Time

Figure 5:



MASSACRE BAY Shio Version 1.0

Tidal heights at MASSACRE BAY, Attu Island, Aleutian Islands
Station No. 2313 Latitude: 52°50.00' Longitude: 186°48.00'
Based on Massacre Bay

From Wed 05/17/2000 to Wed 05/31/2000 Local Daylight Savings Time

Figure 6:

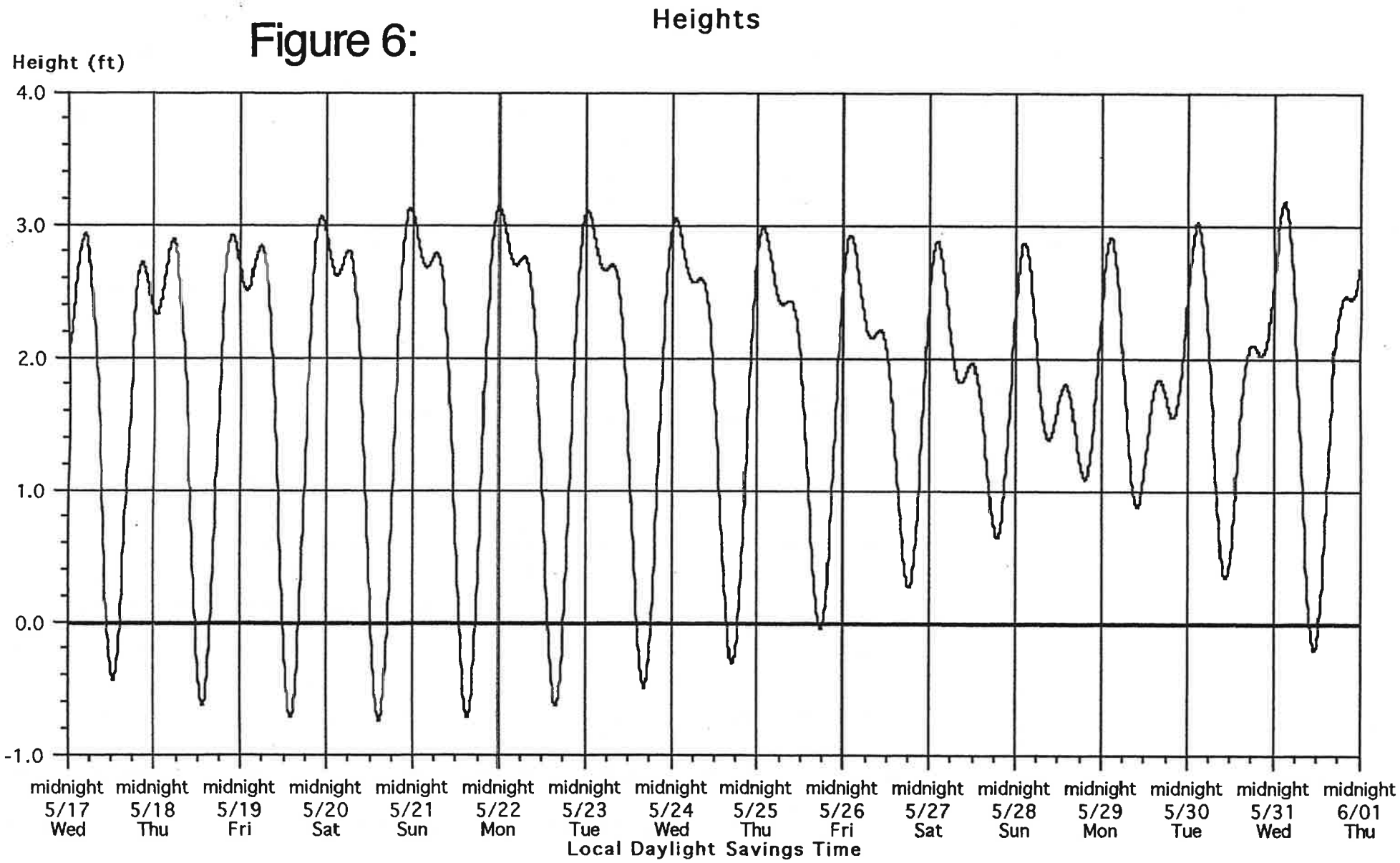


Table 1: Aleutian Islands and Lower Alaska Peninsula Oil Spills: 1981 - 1999

Mar. 2, 2000

No.	Incident	Date	Source Type	Fuel Spilled	Gallons (potential)	Gallons (released)	Location	Env. Effects	Other Comments
1	M/V Dae Rim Fish processor	Mar-81	Fish processor	Diesel	110000	110,000	Attu Island	?	?
2	Oil Spill	Mar-85	?	Diesel	-	3400	Akutan Island	?	?
3	Aleutain Islands Nat'l Wildlife Refuge	Dec-86	Onshore tank	JP-5	-	27,000	Adak Island Navy Base	Some fish kill; no birds or otters oiled.	CG and NOAA oversaw Navy cleanup
4	F/V Birgit 120' crabber	Mar-87	Fishing vessel	Diesel	18000	12,000	Ulak Island, Ak Mari- time Wildlife Refuge	Prior to arrivial of birds and sea otters	Detonation burned remaining fuel
5	F/V Tae Woong 210' fishing vessel	May-87	Fshing Vessel	Diesel Lube oil	105000 several drums	105,000	Uliaga Isl, Aleutians Nat'l Wildlife Refuge	Minor as peak of biota had not yet arrived	Detonation burned remaining fuel
6	F/V Captain Billy 83' fishing vessel	Feb-88	Fishing vessel	Diesel	16000	16,000	Yunaska Isl, Aleutians Nat'l Wildlife Refuge	Minimal biota present' this time of year	Gale force winds broke up vessel, full diesel release
7	F/V Alaska Star 153' fish processor	Feb-88	Fishing vessel	Diesel	36000	36,000	Nikolski Day, Umnak I.	None documented	Heavy weather, total loss of vessel
8	F/V City of Seattle 100' fishing vessel	Nov-88	Fishing vessel	Diesel	12000	12,000	Atka Island	None documented	Heavy weather: fuel quickly dispersed and vessel total loss
9	F/V Opty 139' fishing vessel	Dec-88	Fishing Vessel	Diesel Hydraulic oil Lube oil	16000 1000 400	15,000 1000 400	Shemya Isl, Aleutians Maritime Nat'l Wild- life Refuge	None documented	Heavy weather caused grounding and escape of fuel
10	M/V Aoyagi Maru 288' fish refrig. ves.	Dec-88	Fishing tender	Diesel Bunker C lube oil	32000 78000 3250	32,000	Akun Island	None documented	Bunker C and lube oil burned in vessel's hull
11	Barge Kenai	Jan-89	Cargo barge	Diesel	?	<100	Thin Point, Cold Bay	None documented	Main concern was PCB laden soil from Amchitka
12	T/B Foss 256	Jan-89	Tank barge	Diesel	1800000	84,000	Bird Cape, Amchitka Island	None documented	Heavy weather caused barge grounding
13	M/V Chil Bo San #6 283' fish tender	Jan-89	Fishing tender	Diesel Lube oil	65000 4565	61,000 500	Unalaska Island	None documented	Heavy weather caused grounding
14	M/V Swallow 287' fish cargo ves.	Feb-89	Fish cargo vessel	Diesel Bunker C lube oil	30000 65000 3000	30,000 <1000 0	Dutch Harbor	Several hundred bird fatalities	Concern for contamin- ated intake water at fish processing plants
15	[illegible] 12[illegible] fishing vessel	[illegible]	Fishing vessel	[illegible] Lube oil	[illegible] 1000	[illegible] 0	[illegible]	[illegible]	[illegible]

16	Trident Seafoods Fac.	Jan-90	Onshore tank	Diesel	50000	5000	Sand Pt., Shumagin Isl.	Seven dead birds and possibly one otter	Beach oilng at source and in Mud Bay
17	F/V Skagit Eagle	Feb-91	Fishing vessel	Diesel Hydr. fluid lube oil	18000 400 200	10,000	Reese Bay, Unalaska Island	None documented	Diesel, hydraulic and lube oil were lightered
18	F/V Greenhope	Aug-91	Fishing vessel	Diesel		3000	Atka Island	None documented	Intentional fuel dumping to achieve vessel stability
19	F/V Justin Time	Sep-91	Fishing vessel	Diesel Hydr. fluid	250 5	250 5	Sozavarika Island, Cold Bay	None documented	Accidental grounding, total vessel break up
20	M/V Venture Luna	Mar-92	Fish processor	IFO	7000	<50	Captain's Bay, Unalaska Island	None documented	Vessel pulled off ground few hours after grounding
21	King Cove Lagoon	Dec-92	Onshore facility	Diesel		<100	King Cove Lagoon, King Cove	None Documented	Beach trenching yielded 17 gallons of product
22	F/V Phoenix	Apr-93	Fishing vessel	Diesel	7000	7000	Umnak Island	None documented	Rigging tangled in rudder, high winds caused grounding
23	F/V All Alaskan 350' fish processor	Jul-94	Fish processor	Diesel Lube oil Hydr. oil Gasoline	136000 10000 8 drums 2 drums	10,000	Unimak Pass, Aleutian Maritime Nat'l WR	None documented	Initial fire caused day tank and ammonia release
24	F/V Northern Wind 178' fish processor	Jul-95	Fish processor	Diesel	60000	20K-25K	Sequam Isl., Aleutian Maritime NWR	None documented	Floated free 12 hrs after grdg, rapid response prevented further release
25	F/V Rebecca B 77' fishing vessel	Oct-96	Fishing vessel	Diesel	1500	1000	Tanaga Isl., Aleutian Maritime NWR	None documented	Heavy weather caused grdg and vessel break up
26	F/V Lisa Jo 77' fish vessel	Feb-97	Fishing vessel	Diesel	1200	1200	Akun Island, Aluetian Maritime NWR	None documented	Grounding and break up caused by heavy weather
27	M/V Kuroshima 300'+ fish cargo ves.	Nov-97	Fish cargo vessel	IFO -380	116600	47,000	Unalaska Island	Extensive shoreline, bird oiling & arch. site oiling	Full onscene ISC for major shoreline cleaning & salvage response of 6 months
28	F/V Contoller Bay 78' fish vessel	May-99	Fishing vessel	Diesel Hyd. fluid Lube Oil	6500 600 250	6500 600 250	Unimak Island, Aluetian Maritime NWR	None documented	Grded due to asleep master, heavy weather broke up vessel
29	M/V Redfin 178' freighter	May-99	Freighter vessel	Diesel Lube oil	100000 400	75 25	Cold Bay, Alaska Peninsula NWR	None documented	Fuel transfer after grding refloated vessel

Table 2: Potentials: 1981-1999

No.	Incident	Date	Source Type	Fuel Type	Gallons (potential)	Location	Other Comments
A	M/V Global Sunshine Grain Freighter	Jan-86	Cargo vessel	Fuel Oil #5	300,000	Isl. of Four Mtns	Drifting vessel; tug arrived for assistance
B	M/V Tempest 297' fish processor	Jan-87	Fish Processor	Fuel oil #6	?	Unimak Island	Explosion holed hull above water line, no fuel leak
C	M/V Prince Will'm Sd 180' fish processor	Apr-91	Fish Processor	Diesel	135,000	Captain's Bay, Unalaska Island	Fire forced offshore tow but no fuel consumed or leaked
D	M/V Sea Jade	Aug-91	Fish Processor	Diesel IFO	45,435 276,500	Offshore Dutch Harbor	Collision with other vessel but no fuel tank rupture
E	M/V Hyundai #12 515' grain vessel	Oct-91	cargo vessel	IFO-180 Diesel	174,000 21,000	Simeonof Isl, Shumigan Isls., Ak Marit. NWR	Aground rock pinnacle; major grain and fuel removal; light sheen only
F	F/V Sunset Bay 128' crabber	Nov-91	Fishing vessel	Diesel	30,000	Unimak Island, Ak Maritime Wildlife Rf.	Grounded on soft sandy beach and refloated
G	F/V Komsomolskaya Smena	Jan-95	Fish processor	Diesel	>100,000	Elder Pt., Unalaska Island	Vessel grounding, refloated at high tide
H	F/V Provider 127' fishing vessel	Jun-96	Research vessel	Diesel	12,700	Yunaska Isl., Aleutian Maritime NWR	Rapid response prevented fuel release & boat loss
I	MV Baneasa 833' freighter	Dec-96	Freighter vessel	Diesel Bunker C	176,400 33,600	≈70 mi. S of Atka and Amilia Isl., AlMarNWR	Stuck rudder, finally rescued by CGC and tugs
J	M/V Hekabe	Feb-98	Tanker vessel	Bunker C Diesel Lube oil Ammonia	430,000 100,000 90 tons 210 tons	90 mi. SW of Adak Isl.	Loss of power and heavy weather caused concern until temporary engine repairs restored control
K	M/V Hekifu	Feb-99	Fish procesor	Diesel Bunker C Lube Oil	20,580 117,600 5,292	Dutch Harbor	100 mph winds caused grding, fast action by USCG & locals freed vessel
L	F/V American Star 140' vessel	Feb-00	Crabber/tender	Diesel Lube oil	25,500 1000	Unimak Island, Aleut. Maritime NWR	Steel haul on sandy beach prevented breakup

NOAA Oil Spill Responses: 1981-1999

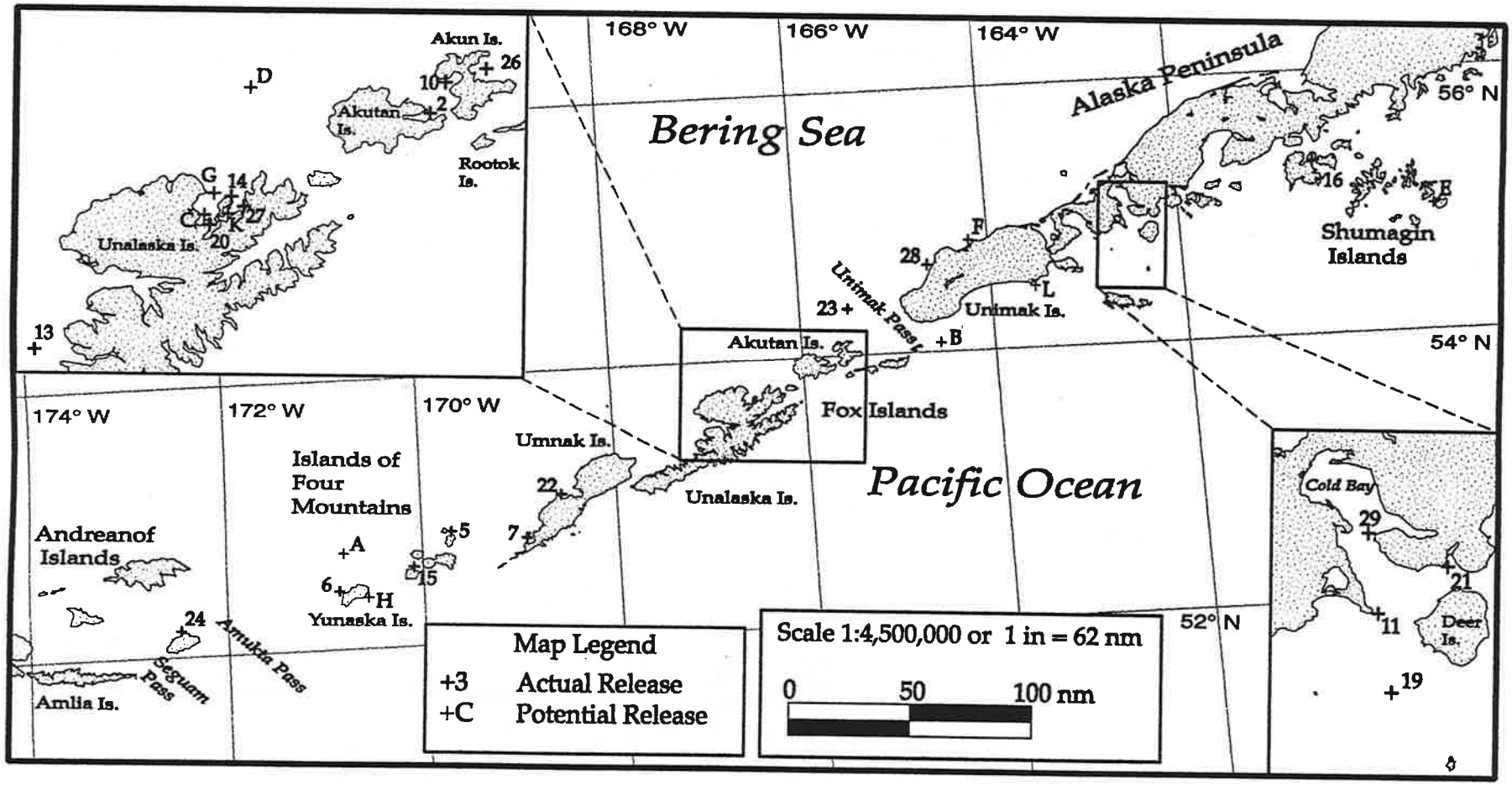


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Figure 7a:

NOAA Oil Spill Responses: 1981-1999

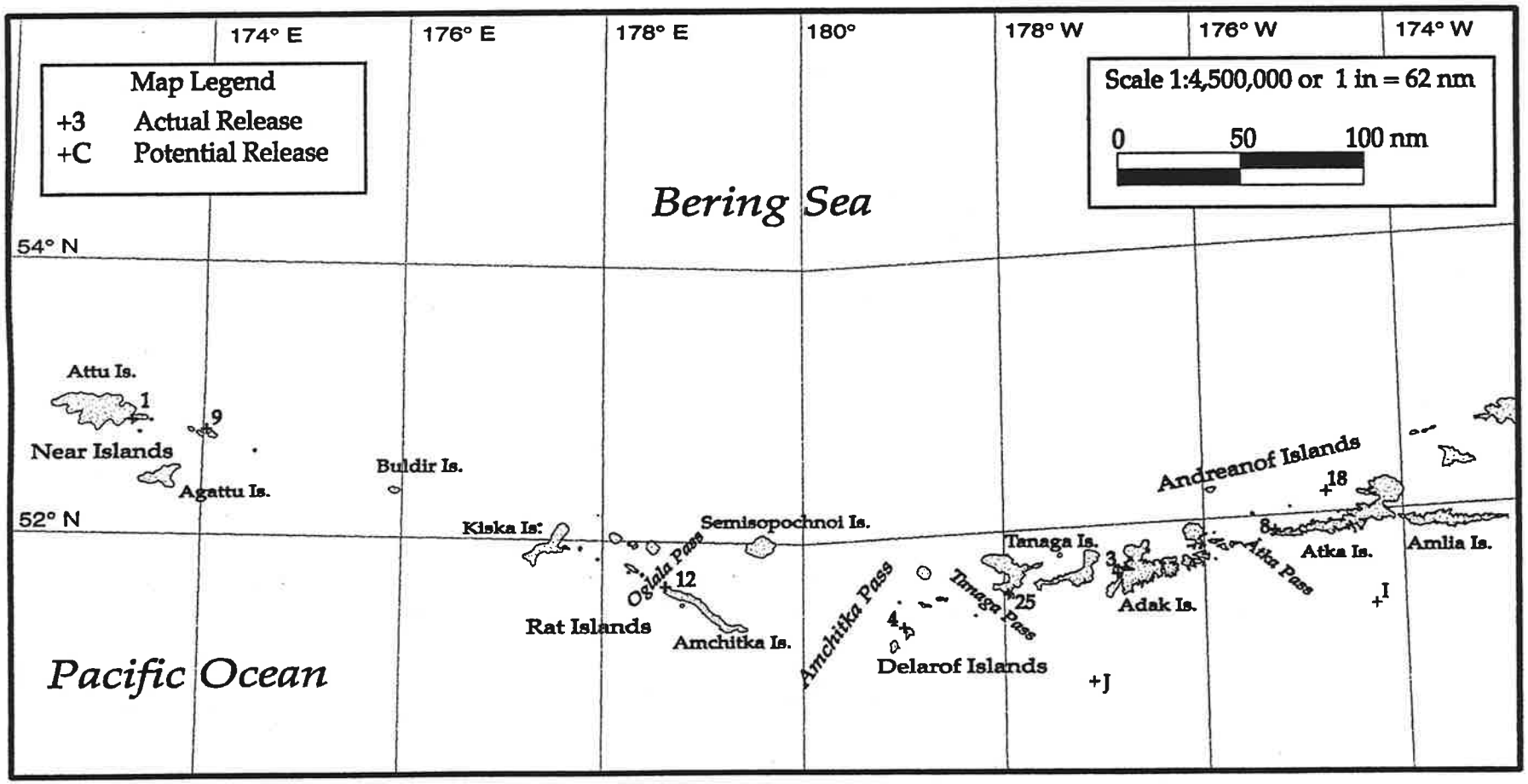

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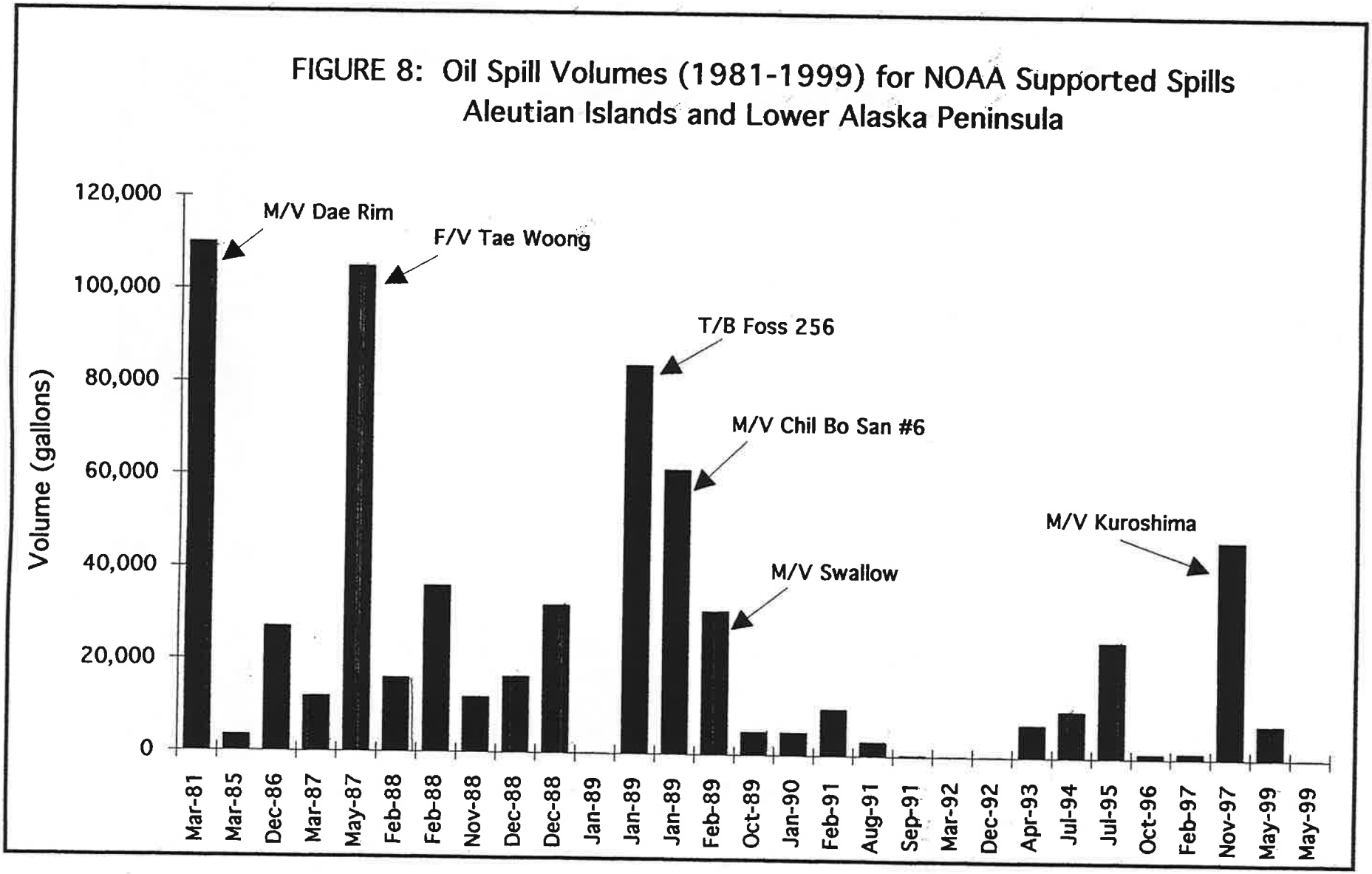
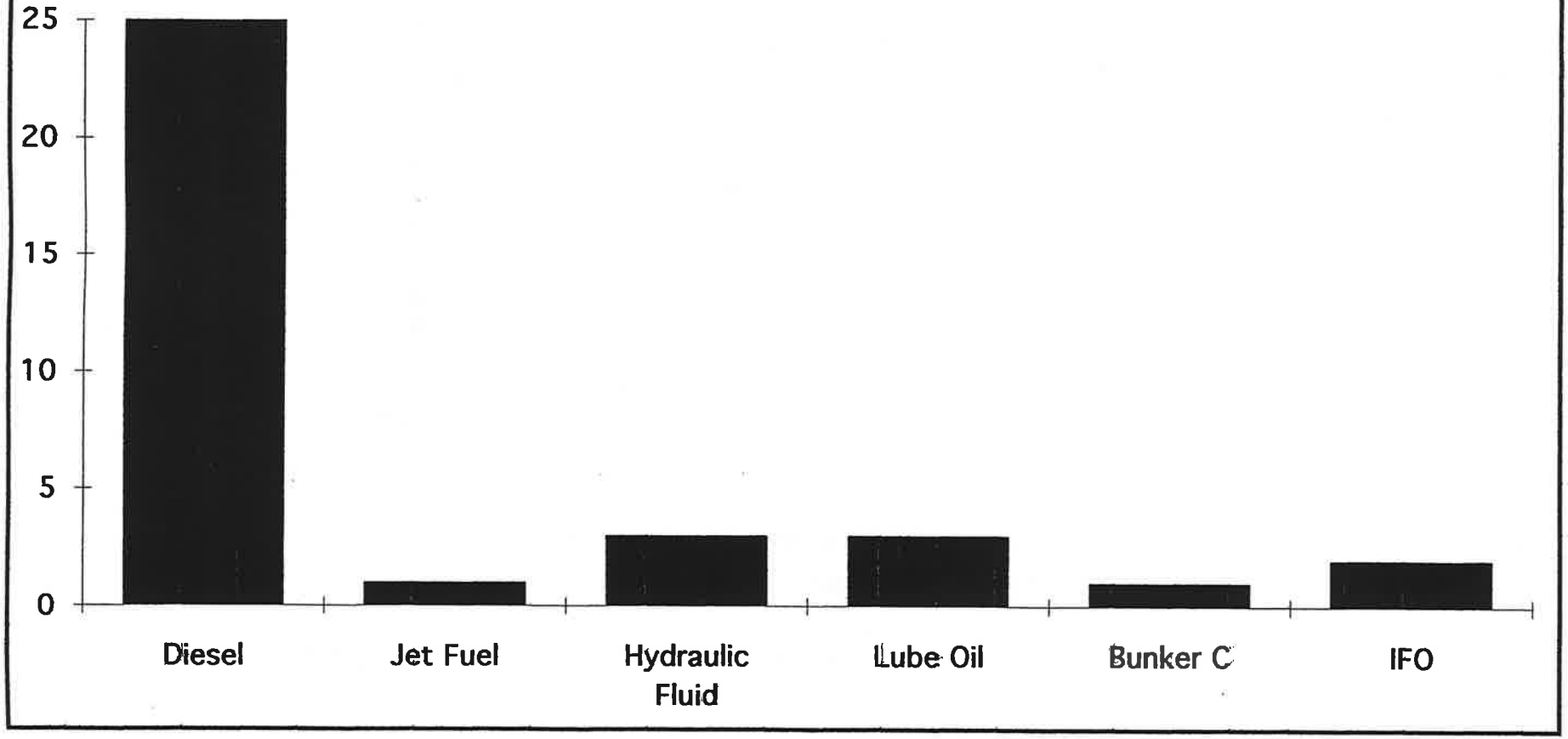
Figure 7b:

FIGURE 8: Oil Spill Volumes (1981-1999) for NOAA Supported Spills
Aleutian Islands and Lower Alaska Peninsula



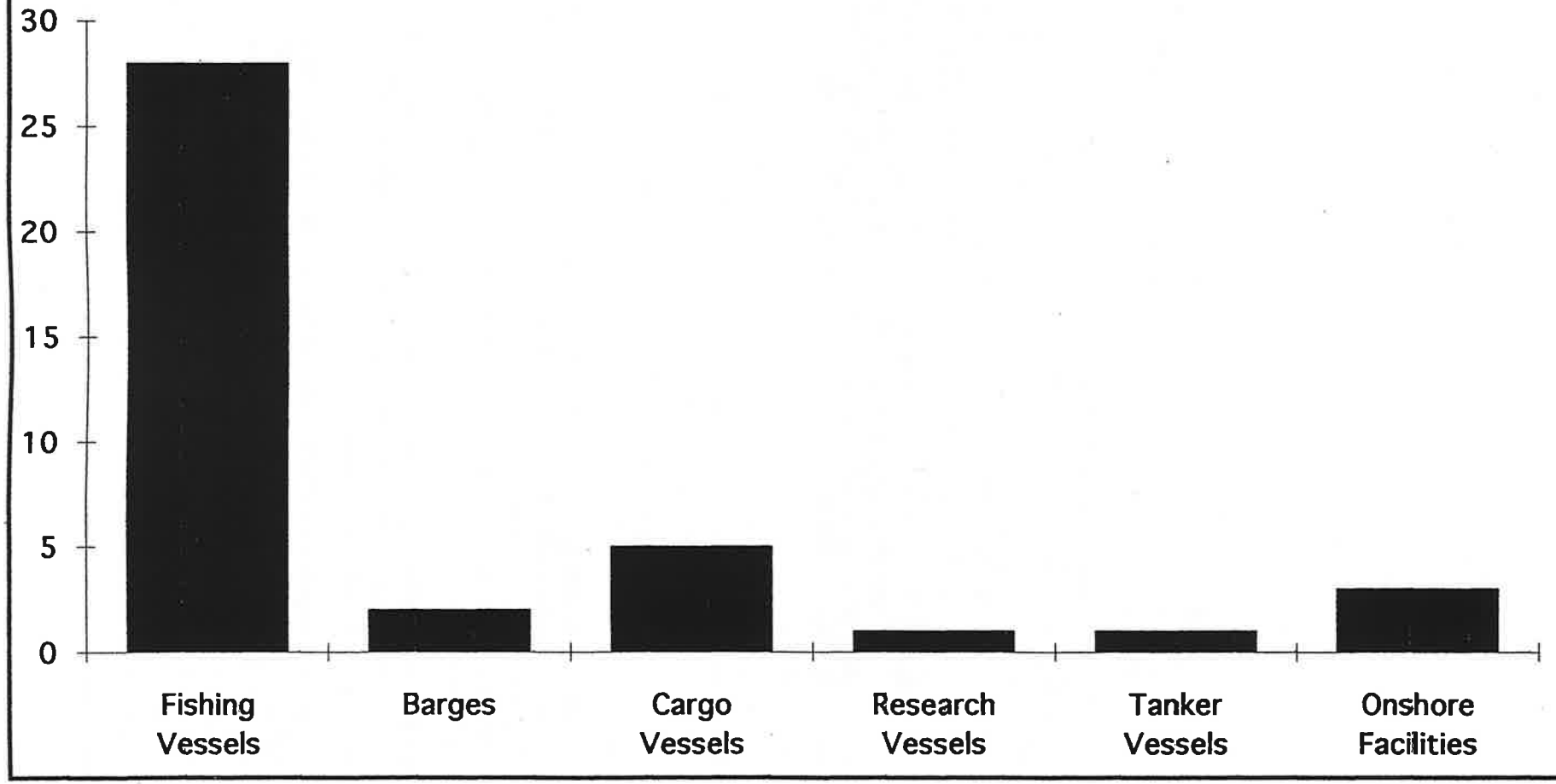
Whitney,2000

FIGURE 9: Number of Spills by Fuel Type (1981-1999, NOAA supported spills)
Aleutian Islands and Lower Alaskan Peninsula



Whitney,2000

FIGURE 10: Numbers of NOAA Supported Incidents by Source (1981-1999)
Aleutian Islands and Lower Alaskan Peninsula



Whitney, 2000

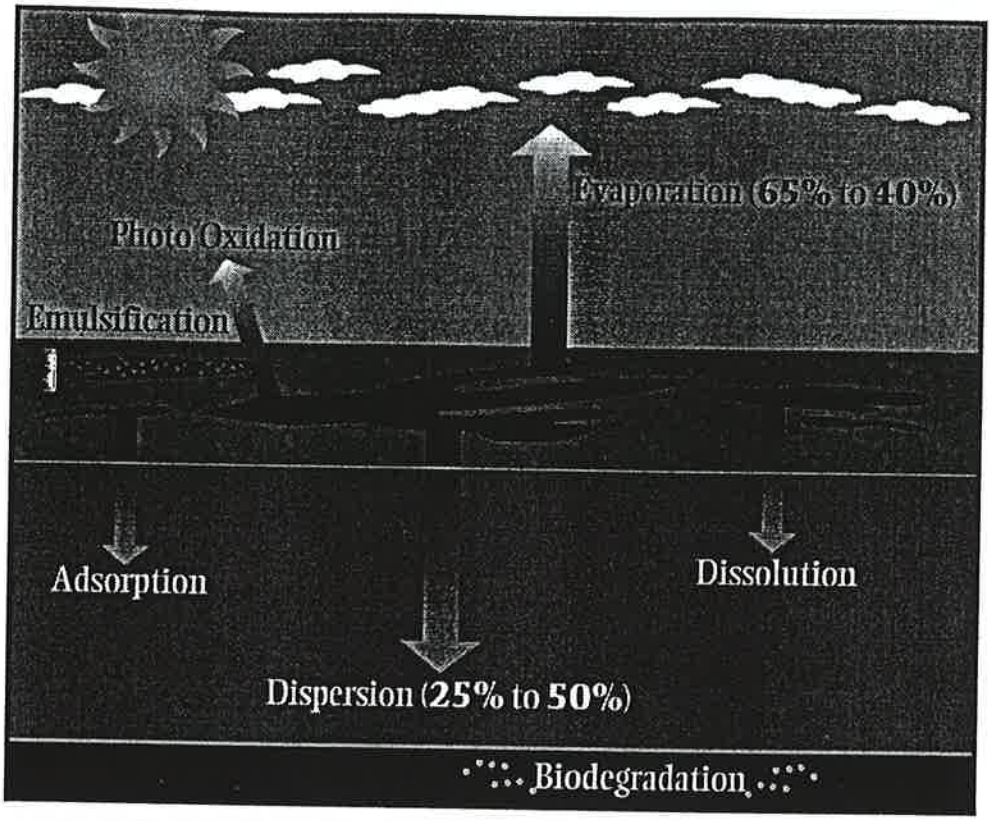
RD #1:

SMALL DIESEL SPILLS in MARINE WATERS: A FACT SHEET

(These facts relate to spills of 500 to 5000 gallons only)

- Diesel fuel is a light, refined petroleum product with a relatively narrow boiling range, meaning that, when spilled on water, most of the oil will evaporate or naturally disperse within a few days or less. This is particularly true for typical spills from a fishing vessel (500-5,000 gallons), even in cold water. Thus, seldom is there any oil on the surface for responders to recover.
- When spilled on water, diesel oil spreads very quickly to a thin film. Even when the oil is described as a heavy sheen, it is 0.0004 inches thick and contains about 1,000 gallons per square nautical mile of continuous coverage. The volume of oil in areas covered by streamers would be much less. Silver sheen only contains about 75 gallons per square nautical mile.
- Diesel has a very low viscosity and is readily dispersed into the water column when winds reach 5-7 knots or sea conditions are 2-4 foot waves.
- Diesel oil is much lighter than water (specific gravity is about 0.85, compared to 1.03 for seawater). It is not possible for this oil to sink and accumulate on the seafloor as pooled or free oil.
- However, it is possible for the oil to be physically mixed into the water column by wave action, forming small droplets that are carried and kept in suspension by the currents.
- Oil dispersed in the water column can adhere to fine-grained suspended sediments which then settle out and get deposited on the seafloor. This process is more likely to occur near river mouths where fine-grained sediment are carried in by rivers. It is less likely to occur in open marine settings. This process is not likely to result in measurable sediment contamination for small spills.
- Diesel oil is not very sticky or viscous, compared to black oils. When small spills do strand on the shoreline, the oil tends to penetrate porous sediments quickly, but also to be washed off quickly by waves and tidal flushing. Thus, shoreline cleanup is <u>usually</u> not needed.
- Diesel oil is readily and completely degraded by naturally occurring microbes, under time frames of one to two months.
- In terms of toxicity to water-column organisms, diesel is considered to be one of the most acutely toxic oil types. Fish, invertebrates and seaweed that come in direct contact with a diesel spill may be killed. However, small spills in open water are so rapidly diluted that fish kills have never been reported. Fish kills have been reported for small spills in confined, shallow water.
- Crabs and shellfish can be tainted from small diesel spills in shallow, nearshore areas. These organisms bioaccumulate the oil, but will also depurate the oil, usually over a period of several weeks after exposure.
- Small diesel spills can affect marine birds by direct contact, though the number of birds affected is usually small because of the short time the oil is on the water surface. Mortality is caused by ingestion during preening as well as to hypothermia from matted feathers. Experience over the last 10 years in Alaska, with hundreds of small diesel spills, is that few birds are directly affected by diesel spills from fishing vessels. However, small spills could results in serious impacts to birds under the "wrong" conditions, such as a grounding right next to a large nesting colony or transport of sheens into a high bird concentration area.

Weathering Processes Affecting Small Diesel Spills (500-5000 gallons)



Over 90% of the diesel in a small spill incident into the marine environment is either evaporated or naturally dispersed into the water column in time frames of a couple of hours to a couple of days. Percent ranges, in parenthses above, represent the effects of winds ranging from 5 to 30 knots.

Adsorption
The process by which one substance is attracted to and adheres to the surface of another substance without actually penetrating its internal structure

Biodegradation
The degradation of substances resulting from their use as food energy sources by certain micro-organisms including bacteria, fungi, and yeasts

Dispersion
The distribution of spilled oil into the upper layers of the water column by natural wave action or application of chemical dispersants

Dissolution
The act or process of dissolving one substance in another

Emulsification
The process whereby one liquid is dispersed into another liquid in the form of small droplets

Evaporation
The process whereby any substance is converted from a liquid state to become part of the surrounding atmosphere in the form of a vapor

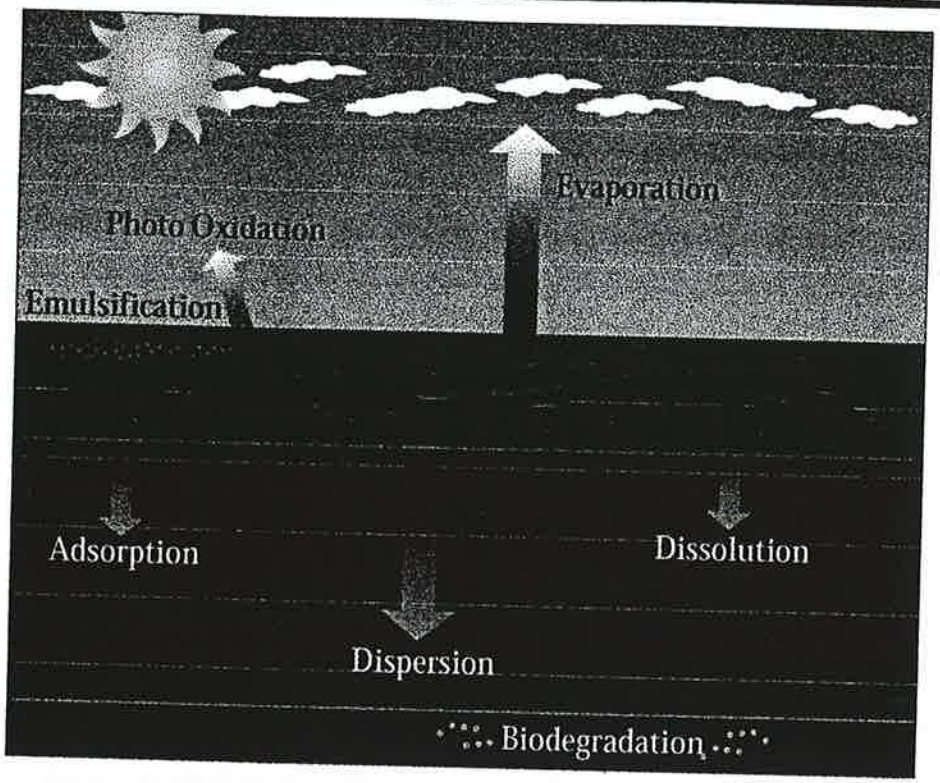
Photo Oxidation
Sunlight-promoted chemical reaction of oxygen in the air and oil

RD #2:

NO. 6 FUEL OIL (Bunker C): A FACT SHEET

- No. 6 fuel oil is a heavy oil produced by blending heavy residual oils with a light oil (often No. 2 fuel oil) to meet specifications for viscosity and pour point.
- When spilled on water, No. 6 fuel spreads into thick slicks which can contain large amounts of oil. Oil recovery by skimmers and vacuum pumps can be very effective, particularly early in the spill.
- Very little of this viscous oil is likely to mix into the water column. It can form thick streamers or, under strong wind conditions, break into patches and tarballs.
- It is a persistent oil; only 5-10 % is expected to evaporate within the first hours of a spill. Thus, spilled oil can be carried long distances by winds and currents. Bunker oil released from the *Lee Wang Zin* near Prince of Wales Island (December 1979) contaminated shorelines over 200 miles from the spill site.
- The specific gravity of a particular No. 6 fuel oil can vary widely, from 0.95 to greater than 1.03. Thus, spilled oil can float, suspend in the water column, sink, or do all of these simultaneously, if the oil is poorly mixed. Floating slicks may become non-floating when they spread into areas of freshwater influence, such as near rivers and glaciers.
- Floating oil could potentially sink once it strands on the shoreline, picks up sediment, and then is eroded by wave action.
- No. 6 fuel oil can be very viscous and sticky, meaning that stranded oil tends to remain on the surface rather than penetrate sediments. Light accumulations usually form a "bath-tub ring" at the high-tide line; heavy accumulations can pool on the surface.
- Shoreline cleanup can be very effective, particularly soon after the spill before the oil weathers, becoming stickier and even more viscous. Removal is needed because degradation rates for heavy oils are very slow, taking months to years.
- Adverse effects of floating No. 6 fuel oil are related primarily to coating of wildlife dwelling on the water surface, smothering of intertidal organisms, and long-term sediment contamination. No. 6 fuel oil is not expected to be as acutely toxic to water column organisms as lighter oils, such as No. 2 fuel oil.
- Direct mortality rates can be high for seabirds, waterfowl, and fur-bearing marine mammals, especially where populations are concentrated in small areas, such as during bird migrations or marine mammal haulouts.
- Direct mortality rates are generally less for shorebirds because they rarely enter the water. Shorebirds, which feed in intertidal habitats where oil strands and persists, are at higher risk of sublethal effects from either contaminated or reduced population of prey.
- The most important factors determining the impacts of No. 6 fuel oil contamination on marshes are the extent of oiling on the vegetation and the degree of sediment contamination from the spill or disturbance from the cleanup. Many plants can survive partial oiling; fewer survive when all or most of the above-ground vegetation is coated with heavy oil. However, unless the substrate is heavily oiled, the roots often survive and the plants can re-grow.

Weathering Processes Affecting No. 6 Fuel Oil (Bunker C) Spills



This figure shows the major weathering processes affecting fuel oil spills. Even at high wind speeds, usually over 70% of a Fuel Oil No. 6 will persist as floating or beached oil for a week or longer.

Adsorption
The process by which one substance is attracted to and adheres to the surface of another substance without actually penetrating its internal structure

Biodegradation
The degradation of substances resulting from their use as food energy sources by certain micro-organisms including bacteria, fungi, and yeasts

Dispersion
The distribution of spilled oil into the upper layers of the water column by natural wave action or application of chemical dispersants

Dissolution
The act or process of dissolving one substance in another

Emulsification
The process whereby one liquid is dispersed into another liquid in the form of small droplets

Evaporation
The process whereby any substance is converted from a liquid state to become part of the surrounding atmosphere in the form of a vapor

Photo Oxidation
Sunlight-promoted chemical reaction of oxygen in the air and oil

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NOAA Scientific Support Team

RD #3:

FACT SHEET: IFO Spills

- IFO 180 and IFO 380 are designations used by the International Standards Organization (ISO) for two intermediate fuel oils that are commonly used as marine fuels. IFOs are typically made by blending the heavy residuum from the refining process with a lighter fuel oil, such as diesel, to meet the viscosity requirements specified by the ISO. IFO 180 has a specified viscosity of 180 centistokes at 50°C; IFO 380 has a specified viscosity of 380 centistokes at 50°C. (Note: Fuel Oil No.6 is an ASTM designation for similar oils, but it encompasses a wider viscosity range than the ISO specifications. Both IFO 180 and 380 could be classified as Fuel Oil No.6 based on their viscosities.)

- At low temperatures, an IFO will flow slowly due to its high viscosity, or not at all depending upon its pour point. Very little of this viscous oil is likely to mix into the water column. It can form thick streamers or, under strong wind conditions, break into patches and tarballs.

- It is a persistent oil; only a small fraction is expected to evaporate within the first hours of a spill. Thus, spilled oil can be carried long distances by winds and currents. Previous IFO spills have contaminated shorelines over 200 miles from the spill site.

- IFOs are relatively dense fuels. Their specific gravity nominally ranges from 0.98 to 1.01. Thus, spilled oil can float, suspend in the water column, or sink depending upon the salinity of the water. Floating slicks may become non-floating when they spread into areas of freshwater influence. Adhesion to sediments can also cause IFOs to sink in fresh and salt water.

- Because IFOs can be very viscous and sticky, stranded oil tends to remain on the surface rather than penetrate sediments. Light accumulations usually form a "bath-tub ring" at the high-tide line; heavy accumulations can pool on the surface.

- Shoreline cleanup can be very effective, particularly soon after the spill before the oil weathers, becoming stickier and even more viscous. Removal is needed because degradation rates for heavy oils are very slow, taking months to years.

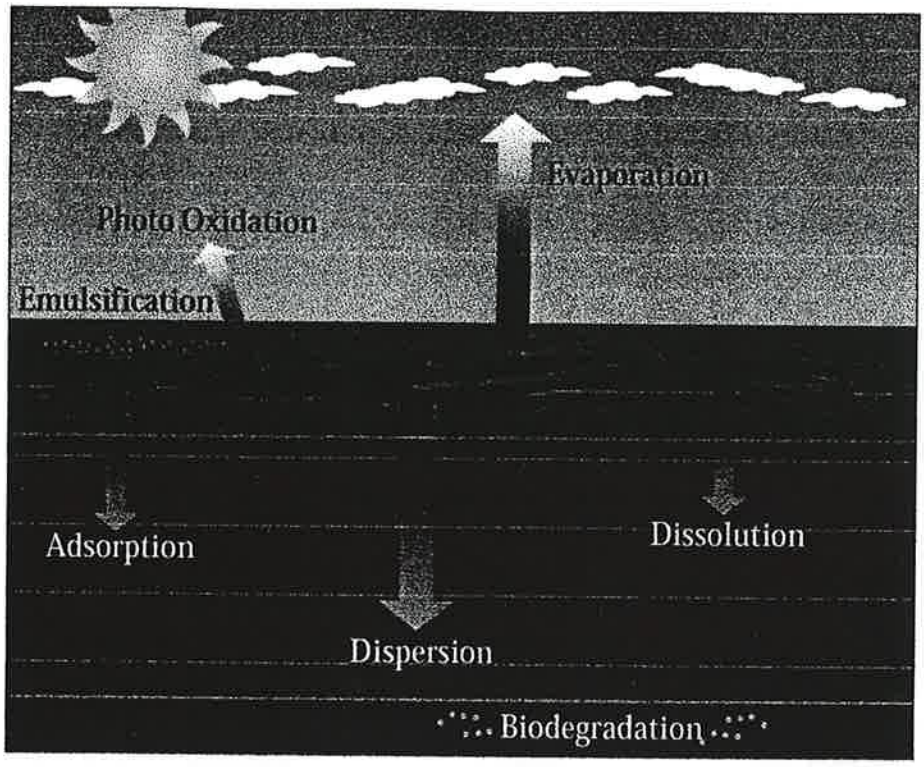
- Adverse effects of floating IFO are related primarily to coating of wildlife dwelling on the water surface, smothering of intertidal organisms, and long-term sediment contamination. IFO is not expected to be as acutely toxic to water column organisms as lighter oils, such as diesel.

- Direct mortality rates can be high for seabirds, waterfowl, and fur-bearing marine mammals, especially where populations are concentrated in small areas, such as during bird migrations or marine mammal haulouts.

- Direct mortality rates are generally less for shorebirds because they rarely enter the water. Shorebirds, which feed in intertidal habitats where oil strands and persists, are at higher risk of sublethal effects from either contaminated or reduced population of prey.

- The most important factors determining the impacts of IFO contamination on marshes are the extent of oiling on the vegetation and the degree of sediment contamination from the spill or disturbance from the cleanup. Many plants can survive partial oiling; fewer survive when all or most of the above-ground vegetation is coated with heavy oil. However, unless the substrate is heavily oiled, the roots often survive and the plants can re-grow.

Weathering Processes Affecting IFO Spills



This figure shows the major weathering processes affecting fuel oil spills. Even at high wind speeds, usually over 70% of IFO will persist as floating or beached oil for a week or longer.

Adsorption
The process by which one substance is attracted to and adheres to the surface of another substance without actually penetrating its internal structure

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The distribution of spilled oil into the upper layers of the water column by natural wave action or application of chemical dispersants

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The act or process of dissolving one substance in another

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The process whereby one liquid is dispersed into another liquid in the form of small droplets

Evaporation
The process whereby any substance is converted from a liquid state to become part of the surrounding atmosphere in the form of a vapor

Photo Oxidation
Sunlight-promoted chemical reaction of oxygen in the air and oil

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NOAA Scientific Support Team

RD #4:

REPORTS ON ALEUTIAN ISLAND & LOWER ALASKAN PENINSULA INCIDENTS 1981-1999

No.	Incident	Date	Location
1	M/V Dae Rim	Mar-81	Attu Island
2	Oil Spill	Mar-85	Akutan Island
3	Aleutain Islands NWR	Dec-86	Adak Island Navy Base
4	F/V Birgit	Mar-87	Ulak Island, AMNWR
5	F/V Tae Woong	May-87	Uliaga Isl, AMNWR
6	F/V Captain Billy	Feb-88	Yunaska Isl, AMNWR
7	F/V Alaska Star	Feb-88	Nikolski Bay, Umnak Isl.
8	F/V City of Seattle	Nov-88	Atka Island
9	F/V Opty	Dec-88	Shemya Isl, AMNWR
10	M/V Aoyagi Maru	Dec-88	Akun Island
11	Barge Kenai	Jan-89	Cold Bay
12	T/B Foss 256	Jan-89	Amchitka Island
13	M/V Chil Bo San #6	Jan-89	Unalaska Island
14	M/V Swallow	Feb-89	Dutch Harbor
15	F/V Polar Command	Oct-89	Chuginadak Island
16	Trident Seafoods Fac.	Jan-90	Sand Pt., Shumagin Isl,
17	F/V Skagit Eagle	Feb-91	Unalaska Island
18	F/V Greenhope	Aug-91	Atka Island
19	F/V Justin Time	Sep-91	Cold Bay
20	M/V Venture Luna	Mar-92	Unalaska Island
21	King Cove Lagoon	Dec-92	King Cove
22	F/V Phoenix	Apr-93	Umnak Island
23	F/V All Alaskan	Jul-94	Unimak Pass, AMNWR
24	F/V Northern Wind	Jul-95	Sequam Isl., AMNWR
25	F/V Rebecca B	Oct-96	Tanaga Isl., AMNWR
26	F/V Lisa Jo	Feb-97	Akun Island, AMNWR
27	M/V Kuroshima	Nov-97	Unalaska Island
28	F/V Contoller Bay	May-99	Unimak Island, AMNWR
29	M/V Redfin	May-99	Cold Bay, ANWR
A	M/V Global Sunshine	Jan-86	Isl. of Four Mtns
B	M/V Tempest	Jan-87	Unimak Island
C	M/V Prince Will'm Sd	Apr-91	Unalaska Island
D	M/V Sea Jade	Aug-91	Offshore Dutch Harbor
E	M/V Hyundai #12	Oct-91	Shumigan Isl., AMNWR
F	F/V Sunset Bay	Nov-91	Unimak Island, AMNWR
G	F/V Komsomolskaya	Jan-95	Unalaska Island
I	MV Baneasa	Dec-96	Atka & Amilia I., AMNWR
J	M/V Hekabe	Feb-98	Adak Isl.
K	M/V Hekifu	Feb-99	Dutch Harbor
L	F/V American Star	Feb-00	Unimak Island, AMNWR

Numbers represent actual spills
Letters represent potential spills

NOAA Response Report

Aleutian Islands National Wildlife Refuge
U.S. Navy Base
Adak Island, Alaska
December 10, 1986

John Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On December 8, 1986, at approximately 1800 (AST) 27,000 gallons of JP-5 overflowed a storage tank onto the tundra at the U.S. Navy base on Adak Island. A portion traveled 50 yds to a small stream and flowed approximately 700 yds downstream into a small boat harbor. Once the product was in the small boat harbor, it affected a National Wildlife Refuge, and hence was reported to Howard Metsker of the USFWS on December 9. He immediately alerted the Coast Guard.

NOAA RESPONSE

Howard Metsker reported this incident to the NOAA Anchorage office on December 10, at approximately 10:30 (AST). As the result of lack of direct jurisdiction over DOD facilities, however, the Coast Guard did not brief the SSC until December 12, 1986. With both the USFWS and the CG, the SSC reviewed the Navy's mitigation and clean-up procedures as well as the resources at risk. The Navy was able to deploy boom and vac trucks, but according to Howard Metsker the Navy had insufficient amount of boom, no skimmer, and inadequately trained on-site personnel. Biological species possibly attected included cormorants, sea otters, and dolly varden.

FINAL DISPOSITION OF THE INCIDENT

Weather conditions of freezing rain/snow with 25-40 knot winds hampered containment and clean-up operations. Nevertheless, the Navy did deploy a boom in the samll boat harbor, and a vac truck picked up approximately 14,000 gallons of pure product from around the tanks and 27,000 gallons of oil/water from the small boat harbor. The USFWS reported that no birds or sea otters were oiled, however, some fish were killed in the small boat harbor. Since the CG has no immediate jurisdiction over oil spills on DOD facilities, no oil-spill contingency plans can be required by them. Nevertheless, the CG does require such

facilites to have fuel transfer plans. To the extent possible, the CG plans to conduct a follow-up investigation of this incident

REFERENCES

1. Phone contact with Howard Metsker, USFWS, on 12/9/86

NOAA Response Report

F/V Birgit
Ulak Island, Aleutian Chain
March 9, 1987

John Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On March 8, 1987, at approximately 1130 LT the F/V Birgit, a 120' crabbing vessel, ran aground on the rocky western side of Ulak Island (51-21'N, 178-59'W), Amchitka Pass, causing extensive damage to the vessel. Initial reports indicated that only 200-300 gallons of diesel fuel had been spilled. Four days later, a report from the salvage crew, Underwater Construction out of Dutch Harbor, related that 1.) the vessel had been abandoned with the crew to arrive in Adak on March 13 and 2.) 70% of the 18,000 gal fuel capacity had been lost to the sea. A USCG C-130 overflight on March 13 reported that the vessel remained hard aground on a rocky ledge 100-200 yards off the beach with a 15 degree starboard list and a light oil sheen up to 3/4 mile long was observed. Because of the vessel's location, communications with the Master and access to the vessel were very difficult.

NOAA RESPONSE

On March 9, 1987, at approximately 0930 LT, the NOAA SSC was notified of the incident and asked to provide trajectory, resources-at-risk, and weather information. Consultation with the NWS in Anchorage indicated quite variable wind and weather conditions as several lows transited the area over a short period of time thus making fuel trajectory forecasts difficult and unreliable, particularly for diesel fuel which has a tendency to break-up and disperse naturally anyway. As a result no formal oil spill trajectories were sought from the Seattle HAZMAT oceanographers. Contacting the USFWS in Anchorage led to a resource report which indicated that by mid-April an estimated 500 sea otters and 6-7,000 birds (gulls, commorants, and puffins) will be in the area. Since Ulak Island is part of the Alaska Maritime NWR, ADFG was willing to concur with whatever information and recommendations USFWS had regarding the incident and resources at risk. USFWS definitely wanted to see the oil removed by the mid-April arrivial of birds and sea otters and recommended three possible courses of action that would be acceptable. These included: 1.) removing the fuel, 2.) burning the fuel in place, and/or 3.) during a favorable wind, blow the tanks and release all the fuel at once. All this information plus weather reports and forecasts were transferred to the OSC.

FINAL DISPOSITION OF THE INCIDENT

The vessel owner retained Underwater Construction to conduct salvage operations. It was decided that it was impossible to salvage the vessel. As a result it was detonated with explosives, causing the remaining fuel to burn. Case was closed on April 21, 1987.

REFERENCES

1. Phone contact with Howard Metsker, USFWS Anchorage, on March 9 & 12, 1987.

2. Phone contact with Mr. Takasuki and Mr. Jim Greene, both NWS Anchorage, on March 9 & 12, 1987.

3. Phone contact with Brad Hahn, ADFG Anchorage, on March 12, 1987.

F/V Tae Woong
Uliaga Island, Aleutian Island Chain, Alaska
May 6, 1987

John Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

At about 0630 (LT) on the morning of May 6, 1987, the F/V Tae Woong, a 210 foot and 1500 ton South Korean fishing vessel, ran aground on the east side of Uliaga Island (169-44', 53-06') with a crew of 49 and approximately 105,000 gallons of diesel and some drums of lubricating oil. Uliaga Island is a part of the Aleutian Islands National Wildlife Refuge. One tank was ruptured upon grounding and was leaking over 1000 gals/hour. The CGC Rush happened to be in the vicinity and was on-scene the same day of the incident to remove the crew. The vessel was determined to be hard aground on the rocks, and salvage appeared not to be feasible. An extensive oil sheen was observed around the vessel extending for approximately 2 miles. Underwater Construction Co. was hired by the owner to evalute the situation and affect any remedial action.

NOAA RESPONSE

At around 0800 (LT) on May 6, 1987, the NOAA Hazmat office in Anchorage was notified by MSO Anchorage of the incident and trajectory, environmental sensitivity and weather support information was requested. As the fuel type was diesel, the CG was advised that any problem would be short range, on the order of 1/2 to one mile, and that with strong winds the diesel would disperse rapidly. Contact with Howard Metsker, USFWS, indicated that at this time of year there were limited numbers of sea otters, sea lions, ducks, geese, and some king and tanner crab. However, as the spring advances more species and greater numbers of waterfowl and marine mammals can be expected. Uliaga Pass, to the SE of Uliaga Island, is one of the main fly-ways through the Aleutian Chain, and as such had the potential of thousands of waterfowl floating in the area. Most on-scene reports reported only limited numbers of ducks and geese who seemed to be unaffected by the diesel spill.

FINAL DISPOSITION OF THE INCIDENT

As the vessel was determined to be unsalvageable, it was decided that the best course of action to remove the ongoing pollution source was to detonate and burn the remaining fuel on-board the Tae Woong. This was carried out on May 13 by Underwater Construction as reps from ADEC, CG,

ADF&G, and USFWS observed the conflagration.

REFERENCES

1. Phone contact with Glenn Watabayashi on 5/6/87.

2. Phone contact with Howard Metsker, USFWS, on 5/6,7,9,11/87.

3. Phone contact with Anchorage NWS on 5/6,8,10/87.

Alaska

F/V CAPTAIN BILLY
Yunaska Island
Aleutian Island Chain, Alaska
February 17, 1988

John W. Whitney, Scientific Support Coordinator

Incident Summary

At 0247,on February 17, 1988, the Coast Guard Marine Safety Office (MSO), Anchorage, was notified that the fishing vessel CAPTAIN BILLY had gone aground in heavy weather on Yunaska Island, one of the Islands of Four Mountains on the Aleutian Islands chain. The vessel was 83 feet long, carried a crew of six people, and had an estimated 16,000 gallons of diesel aboard. The six crewmen went ashore and were rescued by a Coast Guard helicopter. Oil was observed leaking from the vessel.

NOAA Response

NOAA/OMA was notified of the incident on February 17, 1988, by the Coast Guard MSO, Anchorage, and requested to provide information on environmental resources at risk. As Yunaska Island is part of the Alaska Maritime National Wildlife Refuge, the NOAA Scientific Support Coordinator (SSC) contacted the U.S. Fish and Wildlife Service for their appraisal of the situation. The SSC then related to the Coast Guard that no natural resources in the area at this time would be significantly impacted.

Conclusion

Gale force winds and heavy seas persisted in the area of the arounding of the F/V CAPTAIN BILLY, breaking up the vessel and causing a full release of the diesel. Subsequently, the vessel was written off as a total loss. The case was closed on February 22, 1988.

Contacts

Metsker, Metsker, U.S. Fish and Wildlife Service, Anchorage, personal communication, February 17, 1988.

Alaska

F/V ALASKA STAR
Nikolski Bay, Umnak Island
Aleutian Islands, Alaska
February 22, 1988

John W. Whitney, Scientific Support Cooridinator

Incident Summary

At 2308 on February 20, 1988, the U.S. Coast Guard Marine Safety Office (MSO), Anchorage, was notified that the fishing vessel ALASKA STAR was aground in Nikolski Bay on the northwest side of Umnak Island. The grounding occurred in very heavy seas and gale force winds to 100 mph. The vessel was a 153-foot fish procesor with a crew of 15 and carried an estimated 36,000 gallons of diesel aboard. All fifteen crewmen were rescued by another fishing boat.

NOAA Response

NOAA/OMA was notified of the incident on February 22, 1988, by the Coast Guard MSO, Anchorage, and was requested to notify the environmental resource agencies. The heavy weather conditions were predicted to remain unchanged for several days.

Conclusion

Twelve hours after the grounding of the ALASKA STAR, the vessel rolled over and sank. The owner futilely pursued salvage efforts, but the vessel was a total loss. Presumably all the diesel was lost. The case was closed on February 24, 1988.

References

Manen, Carol-Ann, NOAA Regional Response Team representative, Anchorage, personal communication

Metsker, Howard, U.S. Fish and Wildlife Service, Anchorage, February 22, 1988.

Anchorage

F/V CITY OF SEATTLE
Atka Island, Aleutian Islands Chain
November 3, 1988

John W. Whitney, Scientific Support Coordinator

Incident Summary

At 0200 on November 3, 1988, the 100-foot fishing vessel, CITY OF SEATTLE, grounded in heavy seas at Crescent Bay on the northwest end of Atka Island, spilling approximately 12,000 gallons of diesel. All of the crew aboard the vessel were rescued by another fishing boat.

NOAA Response

NOAA/OMA was notified of the incident at 0930 on November 3, 1988, by the U.S. Coast Guard Marine Safety Office, Anchorage, and asked to advise of the environmental resources at risk in the area.

NOAA responded that most animals had left the region for more southerly climates. The U.S. Fish and Wildlife Service estimated that, in the general Crescent Bay vicinity, there remained approximately 100 scattered sea otters and only a few hundred scattered birds (old squaw, harlequin, and scotters).

Conclusion

The owner of the CITY OF SEATTLE wrote off the vessel as a total loss, and the diesel that entered the water quickly dispersed and caused no environmental damage.

Contacts

Becker, Paul, NOAA and U.S. Department of Commerce Regional Response Team representative, Anchorage, personal communication, November 3, 1988.

Robertson-Wilson, Evert, U.S. Fish and Wildlife Service, Anchorage, personal communication, November 3, 1988.

Slater, Claudia, Alaska Department of Fish and Game, Anchorage, personal communication, November 3, 1988.

NOAA Response Report

F/V Opty
Shemya Island, Aleutian Island Chain
December 7, 1988

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On December 3, 1988, the F/V Opty, a 139' vessel owned by Opty Fishing Corporation from Fairhaven, Massachusetts, went aground outside Alcan Harbor on the northwestern side of Shemya Island (52°43.5'N, 174°4.08'E) which is part of the Aleutian Island Alaska Maritime National Wildlife Refuge System. High winds, up to 40 kts from the NE, and high seas, up to 16 feet, seem to be the cause of the grounding. Onboard the vessel contained 16,000 gallons of diesel, 1000 gallons of hydraulic oil, and 400 gallons of lube oil. None of the above were observed to be leaking into the water. MSO Anchorage sent three personnel with zodiac, pump, hoses and sorbents to arrive on scene on December 8 to remove these petroleum products.

NOAA Response

The NOAA Hazmat Anchorage office was notified of the incident on December 7, 1988, by MSO Anchorage and was asked to supply resources at risk information. After contacts were made with NMFS, ADF&G, and the USFWS, the Coast Guard was informed that Shemya Island and Alcan Harbor was used as an overwintering ground for approximately ten species of ducks including sea ducks, old squaw, eiders, and the emperor geese which is considered a threatened species. In addition, the CG was informed that there were approximately 2000 sealions at a feeding/haulout area 1 mile northeast of the entrance to Alcan Harbor. On-site observers from NMFS and from the USFWS noted few actual occurences of birds and marine mammals in the immediate vicinity of the F/V Opty.

CONCLUSION

Efforts by the Coast Guard to pump off the remaining fuel onboard the F/V Opty were thrwarted by adverse weather conditions, and the Coast Guard personnel returned to Anchorage on December 13. The MSO equipment remained at Shemya for the owner and Air Force personnel to attempt to remove the fuel if and when the weather permitted. Eventually the owner was able to board the vessel and remove approximately 1000 gallons of fuel. It is believed that the remainder escaped. Case closed by the Coast Guard.

CONTACTS

1. Evert Robertson-Wilson, USFWS Anchorage, personal communication, December 7, 1988.

2. Jim Fuller, USFWS Adak Island, personal commiunication, December 7, 1988.

3. Kim Sundberg, ADF&G Anchorage, personal communication, Dec. 7, 1988.

4. Ken Griffen, ADF&G Dutch Harbor, personal communication, Dec. 7, 1988.

5. Paul Becker, NOAA RRT rep. Anchorage, personal communication, December 7, 1988.

6. Roger Mercer, NMFS Anchorage, personal communication, Dec. 7, 1988.

7. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, December 7, 1988.

NOAA Response Report

M/V Aoyagi Maru
Akun Island, Aleutian Island Chain
December 10, 1988

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On December 10, 1988, the M/V Aoyagi Maru, a 288' Japanese fish refrigerant vessel, was blown aground at Lost Harbor on the west side of Akun Island (54°12.5'N, 165°37.65'W). Apparently the vessel caught a line in its screw after loading fish from another vessel, was disabled, and was blown onto the rocks. The estimated oil originally onboard was 32,000 gallons of diesel, 78,000 gallons of bunker C and 3250 gallons of lube oil. Despite the extremely inclement weather, the CGC Rush was able to get to the scene by the evening of December 11 and rescued the 19 crewmen. The vessel sustained holes in its engine room and two of its three holds. Efforts of the owner reps to get to the scene were thwarted by continued bad weather, and it wasn't until December 15 that on-site observers were able to get to the vessel. Reports indicated only a sheen around with the vessel with minimal pollution, and apparently water coming in through the holes in the bottom of the hull were hydraulically supporting the bunker C.

As of December 28, the hull underwriter declared the vessel a contructive total loss, and since the terms of fuel removal proposed by the owner were not acceptable to the FOSC, the Aoyagi Maru was declared a federal spill on December 28. The FOSC evaluated his options, and on January 13 the Alaska RRT concurred with his recommendation to attempt to burn the remaining fuel in place. It was not considered feasible to pump the bunker C from the vessel's tanks due to its high viscosity; it had congealed to a tar-like consistency.

NOAA RESPONSE

The NOAA Hazmat Anchorage office was notified of this incident around noon on December 10, 1988, by MSO Anchorage and was requested to provide resources at risk information. After consultation with NOAA, USFWS and the ADF&G, the Coast Guard was informed that this area was not used as an overwintering area for birds or marine mammals although some birds may be passing through. In particular, the USFWS named the whiskered ocklet and the Aleutian Canadian geese as those species possibly passing through this area. In the spring and summer this area

teems with seabirds and waterfowl. At the January 13 RRT meeting, the SSC was requested to present information on the winds, currents and likely spill trajectories and scenarios. Since burning the refrigerant vessel involved combusting large amounts of polyurethane foam and fiberglass insulation, the SSC was asked to investigate the possible toxic combustion by-products of this type of conflagration. In addition, contacts were established with the native village of Akutan, 7-8 miles from the grounded vessel, to keep them informed concerning the incident response.

CONCLUSION

After receiving intervention approval by the Commandant, the Coast Guard hired Underwater Construction to carry out the explosive and combustion work of the Aoyagi Maru. The contractor was accompanied by representatives from the Pacific Strike Team, the Navy EOD office, the USFWS, and MSO Anchorage. Detonation of the vessel occurred on March 20 and two weeks later it was still burning. Case was closed on June 5.

CONTACTS

1. Evert Robertson-Wilson, USFWS Anchorage, personal communication, December 10, 1988.

2. Lance Trasky, ADF&G Anchorage, personal communication, December 10, 1988.

3. Paul Becker, NOAA RRT rep. Anchorage, personal and written communication throughout the incident

4. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication throughout the incident

5. Robert Sherman, LSU Environmental Sciences Dept., Baton Rough, LA, Email communication several times throughout the incident.

6. Ed Overton, LSU Environmental Sciences Dept., Baton Rough, LA, Email communication.

7. Mike Wiedner, ADF&G Anchorage, personal and written communication throughout the incident.

8. Steve Corb, DHHS Public Health Service RRT representative, Anchorage, personal communications on Jan. 9-12, 1989.

9. Jacob Stepotan, Dave McGlasken, and Dimitry ?, Public and native officials in the community of Akutan, AK., phone conversations, Jan. 4-13, 1989.

10. Chemical and Geological Laboratories, Anchorage, personal communication and combustion references from U.S. Bureau of Mines and from Underwriters' Laboratories, January 4-9, 1989.

NOAA Response Report--Alaska

Barge Kenai
Thin Point, Cold Bay
January 4, 1989

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On January 3, 1989, the barge Kenai grounded at Thin Point at the entrance to Cold Bay (55°N, 162°40'W) after it had broken its tow line with the accompanying tug. The barge was carrying mostly dry goods, but also had a minor amount of diesel fuel and 12 containers (40,000#) of low-level PCB laden soil that had just been removed from the U.S. Navy facility at Amchitka Island and was being taken to a repository in Oregon. None of the containers was lost overboard, however, damage to one of the tanks spilled less than one hundred gallons of diesel.

NOAA RESPONSE

The NOAA/OAD office in Anchorage was notified of the incident on January 4, 1989, by the the Coast Guard MSO in Anchorage. In the process of notifying the resource agencies, it was learned that the USFWS had been directly involved in the removal of the PCB contaminated soil from Amchitka, and they were put in direct contact with the Coast Guard to help deal with the situation. Although the vessel's manifest had recorded that the contaminated soil was not a DOT hazardous waste or an EPA regulated waste, further discussion with EPA indicated that it, in fact, was an EPA regulated hazardous material.

CONCLUSION

Several attempts to refloat the barge were conducted by Crowley Maritime. Finally on January 20 the barge Kenai was successfully refloated and taken to Sand Point for repairs. Non of the PCB contaminated soil was lost, and the only pollution that resulted was the minor diesel spill.

CONTACTS

Paul Becker, DOC RRT representative, Anchorage, personal communications.

Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communications.

Evert Robertson-Wilson, USFWS, Anchorage, personal communications.

Mike Weidner, ADF&G, Anchorage, personal communications.

NOAA Response Report--Alaska

T/B Foss 256
Amchitka, Island, Aleutian Island Chain
January 18, 1989

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On January 17, 1989, at approximately 0800 (LT), the tank barge 256, owned by Foss Maritime Co, Seattle, holed itself during heavy weather at Bird Cape, Amchitka Island (51°35'N, 178°40'E). The vessel was transferring diesel fuel to the U.S. Navy facility when high winds, approximately 70 kts, pushed it and the tug Daniel Foss over rocks ripping holes in several cargo tanks. The total capacity of the barge was approximately 1,800,000 gallons of diesel. The tug Daniel Foss with the barge in tow moved from Bird Cape to Chitka Cove. The oil remaining in the holed tanks was pumped to undamaged tanks.

NOAA RESPONSE

The NOAA Alaska SSC was notified of the incident on January 18, 1989, by the Coast Guard Marine Safety Office in Anchorage. As the area of the incident was plaqued with atrocious weather and things happened so fast, no asisstance was requested by the Coast Guard. Nevertheless, the resource agencies involved were notified that the spill had occurred.

CONCLUSION

As the weather allowed, the fuel transfer was completed by January 25. The barge apparently lost approximately 84,000 gallons of diesel. U.S. Navy personnel surveyed the beach from Bird Cape to Chitka Cove and found no evidence of the the spill on the beach. Case closed on January 26.

Response Report--Alaska

M/V Chil Bo San #6
Unalaska Island, Aleutian Chain
January 11, 1989

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On January 11, 1989, the M/V Chil Bo San #6, a 283" fish carrier owned by Korea Wonyang Fisheries, reported inself in distress on the west side of Unalaska Island. It reportedly had a broken propeller shaft and was drifting in severe weather conditions. With anchors dragging, the vessel grounded at 53°35.1N, 167°08.0W, two miles south of Spray Point. The vessel was carrying 4565 gallons of lube oil, in drums and tanks, and approximately 65,000 gallons of diesel. On January 15, a surveyor observed a sheen around the vessel extending two miles south. Apparently the vessel came over a reef and settled onto the rocks sideways, and it ended up beached in a small cove.

NOAA RESPONSE

On the morning of January 11, 1989, the NOAA Hazmat office in Anchorage was notified of the incident by the Coast Guard MSO Anchorage, and resources-at-risk information was requested. Contacts with NMFS, USFWS and ADF&G indicated that for this time of year there generally weren't large numbers of wildlife or habitat that would be at risk. ADF&G did report that the adjacent Kashege Bay was an important biological refuge for juvenile and female crab.

CONCLUSION

Due to its isolated location and inclement weather, no immediate response to the vessel was possible. During the ensuing summer, the vessel owner was able to board the vessel and removed roughly 4000 gallons of lube oil and 500 gallons of diesel. The balance was lost to the environment. Case closed on August 28, 1989.

CONTACTS

Paul Becker, DOC NOAA representative to RRT, Anchorage, personal communication throughout the incident

Mike Weidmer, ADF&G, Anchorage, personal communication throughout the incident.

Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication throughout the incident.

NOAA Response Report

M/V Swallow
Dutch Harbor, Aleutian Islands, Alaska
February 27, 1989

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On the morning of February 27, 1989, the M/V Swallow, a 287' Japanese refrigerant fish cargo vessel, grounded just south of Ulakta Head (53°55'N, 166°30'W) and roughly ten miles north of the town of Unalaska. The vessel was carrying approximately 65,000 gallons of Bunker C, 30,000 gallons of diesel, 3000 gallons of lube oil, and over 200 tons of frozen crab. Within a few days most of the diesel and some of the Bunker C had been lost. As the vessel lost generating capability shortly after it grounded, the Bunker C fuel stiffened up and little was actually lost into the environment. Booms were of little use in the surf zone where the vessel was grounded.

NOAA RESPONSE

The NOAA Hazmat office in Anchorage was notified of the incident at 10:30, February 27, by the MSO Anchorage and was requested to provide information on oil trajectories and resources at risk. After consultation with Seattle Hazmat, the Coast Guard was informed that since the tidal range is so small in this area, that currents are dominated by the wind direction. As a result constant communication was maintained with the NWS, and the wind and weather data was transferred daily to the CG. In discussions with ADF&G, USFWS, and NOAA, it was learned that the major resources at risk involved seabirds particularly a group of roughly 200 emperor geese near in Iliuliuk Bay. The emperor is on the endangered species list. On March 3, the SSC was asked to come to Dutch Harbor to assist the OSC in dealing with the complains of Unalaska fish processes of contaminated intake water. The SSC was on-scene for three days.

CONCLUSIONS

On March 1 the OSC determined that the owner's spill response was inadequate and delared it a federal spill. Contractors and the Pacific Strike Team were brought in the evaluate the vessel. It was determined that heaters and pumps would be necessary to remove the thickened Bunker C, and for the next two months, weather permitting, the slow process of disposing of the crab and off-pumping the fuel was completed. The USFWS provided a hazer who was able to scare some birds, particularly the

emperor geese, away from the path of the ensuing diesel. Little effect was noted on the numerous birds in Iliuliuk Bay until about one week after the spill when numerous birds began acting strange and washing up dead on the shorelines. DOI and USFWS were called in and set up a bird rehabilitation center at which a total of 282 dead birds were recovered and only 8 live birds were released. Some black oil was found on the beaches in Summer Bay, five miles east of the vessel grounding.

CONTACTS

Gary Hufford, National Weather Service, Anchorage, personal communications throughout the spill.

Ken Griffin, Alaska Dept. of Fish and Game, Dutch Harbor, phone and personal communications throughout the spill.

Mike Weidman, Alaska Dept. of Fish and Game, Anchorage, phone contact on Feb. 27, 1989.

Wayne Dolezal, Alaska Dept. of Fish and Game, Anchorage, personal communication in Dutch Harbor, March 3-6, 1989

Evert Robertson-Wilson, U.S. Fish and Wildlife Service, Anchorage, phone contact and personal communication throughout the spill.

Pam Bergmann, DOI Office of Environmental Protection, Anchorage, phone contact and personal communication throughout the spill.

Paul Gates, DOT Office of Environmental Protection, Anchorage, phone contact throughout the spill.

Paul Becker, DOC RRT Representative, Anchorage, personal and phone contact throughout the spill.

Brad Davis, National Marine Fisheries Service, Anchorage, phone contact throughout the spill.

Tom Beardsley, Alaska Dept. of Environmental Conservation, Dutch Harbor, personal communication, March 3-6, 1989.

Wells Stephensen, U.S. Fish and Wildlife Service, Anchorage, personal communication in Dutch Harbor, March 4-5, 1989.

NOAA Response Report

F/V Polar Command
Chuginadak Island, Aleutian Islands, Alaska
October 15, 1989

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

At approximately 0930 on October 15, 1989, the F/V Polar Command, a 122' fishing vessel owned by Deep Sea Fisheries, went aground on the south side of Chuginadak Island (52°49'N, 169°49'W). The vessel had 42,000 gallons of diesel and 1100 gallons of lube oils in 20- 55 gallon drums. The vessel was perched on a rock which was protruding into the engine room. The 28 crewmen were safely removed via another fishing vessel in the vicinity. With the owner assuming responsibility, another vessel was hired to accomplish mechanical removal of the petroleum. At the same time plans were developed to detonate and burn the remaining fuel.

NOAA RESPONSE

NOAA Hazmat was notified of this incident at 1730 on October 15, 1989, by MSO Anchorage and were requested to provide information on resources-at-risk. After polling the resource agencies, the CG was informed that at this time of year the area contained no particular resources which might be harmed by a pollution incident. The State Historical Preservation Office identified five historical sites on the island but none were affected by the location of the grounding.

CONCLUSION

Physical removal of all the retrievable oil was accomplished, although several thousands gallons of diesel are estimated to have entered the water and dissipated.

CONTACTS

1. Evert Robertson-Wilson, USFWS Anchorage, personal contact, October 16, 1989.

2. NWS Anchorage, personal contact, Oct. 16, 1989.

3. Paul Becker, DOC RRT Rep., Anchorage, personal contact, Oct. 16, 1989.

4. Claudia Slater, ADF&G Anchorage, personal contact, Oct. 16, 1989.

5. Pam Bergmann, DOI Office of Environmental Protection, personal contact, October 16, 1989.

ALASKA

Trident Seafoods Facility
Sand Point, Shumagin Islands, Alaska
January 17, 1990

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

Late on the evening of January 15, 1990, approximately 5000 gallons of diesel escaped into the water from the tank farm at Trident Seafoods in Sand Point, Alaska. Apparently, an open valve allowed roughly 50,000 gallons of diesel to release into the diked area around the tanks. And then an open water-release valve in the dike allowed 5000 gallons to permeate the beach gravel outside the dike. From the beach gravel, the diesel seeped into the ocean and was carried north by the currents about 1 nautical mile where some of it lodged in a shallow bay/lagoon called Mud Bay. The owner immediately assumed responsibility for the spill. However, inclement weather made it difficult to fly in additional sorbent pads and cleanup supplies.

NOAA RESPONSE

NOAA was not notified of the spill until the morning of January 17 by the Coast Guard MSO in Anchorage. After contacting USFWS and ADF&G, the CG was informed that Mud Bay was a reasonably sensitive location containing small over-wintering populations of harlequin ducks, old squaws, steller eider, scotors murres, kittywakes, and possibly some sea lions and sea otters. Also, the CG was informed that two cultural resources--namely on old shack and an old church-- were in the vicinity.

CONCLUSION

Workers used sorbents and the cutting of oil-stained kelp in Mud Bay to remove the oil from the environment. Trenching occurred on the beach face which along with sump pumps were able to interrupt a small portion of the diesel the original escaped. In the end 7 dead birds and possibly one dead otter were reported.

CONTACTS/BIBLIOGRAPHY

1. Kim Sundberg, ADF&G, Anchorage, personal contact on Jan. 17 &18.

2. Pam Bergmann, DOI Office of Environmental Protection, personal contact on January 19.

Alaska

F/V Skagit Eagle
Unalaska Island, Aleutian Islands chain
February 8, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

The U.S. fishing vessel Skagit Eagle ran aground in stormy seas in Reese Bay on Unalaska Island (54°0'35"N, 166°44'15"W), and ruptured three of its five fuel tanks on February 8, releasing 10,000 gallons of diesel fuel. With bad weather, the first 24 hours were a SAR mission as the vessel's five crew members waded from the vessel to the island, where the USCG rescued them with an H-3 helicopter. Total fuel onboard included approximately 18,000 gallons of diesel, 400 gal of hydraulic oil and 200 gal of lube oil. The owner of the vessel was Quest Marine from Sedro Wooley, WA.

NOAA RESPONSE

The USCG MSO Anchorage office contacted the Anchorage Hazmat office on the afternoon of February 8, outlining the incident. Initially they emphasized the SAR nature of the incident, but also asked for information on resources at risk. After making contacts with the resource agencies the CG was informed of the possible occurrence of the following resources: maybe 100+ sea ducks, scooters and harlequins; 10+ eagles: 100+ auklets; 100+ emperor geese; and 10-20 sea otters in the area. Due to the possible existence of cultural resources, it was recommended that no excessive ground disturbance be carried out if beach work was required.

CONCLUSION

Magone Marine of Dutch Harbor was contracted to salvage the vessel and to lighter the approximately 8400 gallons of diesel fuel, hydraulic oil, and lubricating oil that remained on the vessel. This was accomplished by March 8. On-scene observers reported very few birds and only a couple of sea lions sighted. None of the animals showed any evidence of oiling. Generally, bad weather hampered the entire operation causing rapid and thorough dispersion of the 10,000 gallons of diesel.

CONTACTS

1. Evert Robinson-Wilson, USFWS, Anchorage, personal communication, February 11, 1991.

2. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, February 10, 1991.

3. Paul Becker, DOC RRT representative, Anchorage, personal communication, February 9, 1991.

4. Chris Swenson, ADF&G, Anchorage, personal communication, February 8 & 12, 1991.

5. NWS Anchorage, personal communication, February 8,9,10, 1991.

Alaska

F/V Greenhope
Atka Island, Aleutian Island Chain, Alaska
August 13, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On the morning of August 13, 1991, the F/V Greenhope, fishing the waters around the western Aleutians became unstable due to its heavy load of fish. In order to compensate for this lack of stability the skipper decided to dump fuel and preceded to pump about 3000 gallons of diesel over the side into the ocean. At the time the vessel was approximately 20 miles north of Atka Island at 52.2°N, 174.4°W.

NOAA RESPONSE

The Coast Guard notified NOAA Hazmat of the incident late on the morning of August 13, 1991. There was no request for information or assistance. However, it was noted that the diesel would dissipate rapidly in the high seas and winds.

CONCLUSION

No further action or pollution was necessary to remedy the condition.

CONTACTS

1. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, August 13, 1991.

2. NWS Anchorage, personal communication, August 13, 1991.

Alaska

M/V Sea Jade
Bering Sea north of Dutch Harbor
August 23, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On the morning of August 23, 1991, two large fish processing vessels collided approximately 39 miles north of Dutch Harbor (54°34'N, 166°40'W). With calm seas and clear weather, the M/V Ocean Aya ripped a large 5 meter long fracture from the waterline to the deck of the M/V Sea Jade. The estimated fuel on board included 276,500 gallons of IFO and 45, 435 gals of diesel. Initial reports were that no fuel had leaked and there were no personnel casualties.

NOAA RESPONSE

NOAA was notified of the incident by the Coast Guard MSO Anchorage on the morning of August 23 while attending a spill drill in Prudhoe Bay. The Coast Guard indicated that their was a very low probability that any fuel would be spilled since the crack appeared not to have penetrated any fuel tanks, the ship was stable and proceding to Dutch Harbor, and the weather was very good. As a result, no assistance was requested. Nevertheless, notification were made to all the resource agencies.

CONCLUSION

Both vessel were ordered to proceed to a position 4 miles outside of Dutch Harbor for a full evaluation of their condition. The Ocean Aya was released having sustained minimal damage, however, the Sea Jade is stuck in Dutch Harbor until repairs are made to its hull. No fuel was released during the incident.

CONTACTS

1. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, 8/23/91.

2. Paul Becker, DOC RRT representative, Anchorage, personal communication, 8/23/91.

3. Alaska Department of Fish and Game, Dutch Harbor.

Alaska

F/V Justin Time
Sozavarika Isl., Aleutian Island Chain
September 4, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

After completing a long, sleepless period of halibut fishing, the dazed operator of the F/V Justin Time, owned by Peter Pan Seafoods, accidentally ran his vessel aground on the west side of Sozavarika Island (54°51.3'N, 162°31.5'W) with 20,000 pounds of halibut on board on the morning of September 4, 1991. Fuel on board included 250 gallons of diesel and 4-5 gallons of hydraulic fluid. The engine room was reported breached by a large rock. On scene weather was SW winds to 10 kts. increasing to 25 kts in the afternoon with 4-6 foot morning seas increasing to 12 feet by the evening. The crew abandoned ship to a nearby by fishing vessel.

NOAA RESPONSE

Shortly after noon on September 4, MSO Anchorage notified NOAA of the incident and was asked for an evaluation of the situation. Both the Coast Guard and NOAA agreed that with the impending weather, the F/V Justin Time was surely due to break up and disgorge its fuel and cargo to the open sea. With only 250 gallons of diesel on board, it was judged that the consequences of such would be fairly insignificant.

CONCLUSION

The Coast Guard air station in Kodiak responded to an EPIRB signal from the F/V Justin Time. During the overflight the crew reported light diesel sheen approximately 50 yards x 100 yards off shore from the vessel. Sheen was reported as broken and dissipating due to wave action.

Name of Spill: M/V Venture Luna

NOAA SSC: John W. Whitney, Alaska

Date of Spill (mmddyy): 03/21/92

Location of Spill: Captains Bay, Dutch Harbor, Unalaska Island, Alaska

Latitude: 53°55' N

Longitude: 166°35'W

Oil Product: IFO

Oil Type: Type 3 - Medium Oils (most crude oils)

Barrels: less than 1 barrel of oily water mixture

Source of Spill: Non-Tank Vessel

Resources at Risk:

None

Dispersants: No

Bioremediation: No

In-situ Burning: No

Other Special Interest: none

Shoreline Types Impacted: none

Keywords:

Incident Summary: The Venture Luna incident incurred early the morning of March 21, 1992, at Captains Bay, Dutch Harbor, Unalaska Island, Alaska. As the result of 50-60 knot winds, the vessel drug anchor pushing it aground and damaging a tank containing 7000 gallons of an IFO. Sheening was noticeable around the vessel, however due to high winds, this effect was rapidly dispersed and dissapated. It was estimate that less than 50 gallons of an oily-water mixture was released before the source was secured. The damaged tank had a 0.5 meter water water bottom in it. The vessel owner immediately assumed responsibility and conduct the control and cleanup, if necessary. The case was closed on March 25.

Behavior of Oil: Only a sheen resulted for a short period of time in the immediate vicinity of the vessel. No shoreline was impacted, although personnel from Coast Guard and ADEC inspected along shoreline for this possibility

Countermeasures and Mitigation: The vessel was pulled off ground a few hours after goin aground. By the afternoon of March 22 the wind had dissapated to the level that a boom could be placed around the vessel, however no oil was ever observed within the boom.

Other Special Interest Issues:

None

NOAA Activities: NOAA support was limited to phone contact with the Coast Guard. NOAA provided weather updates throughout the incident.

References: NWS in Anchorage

Name of Spill: King Cove Lagoon

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 12/4/92

Location of Spill: King Cove, Alaska

Latitude: 55°3.0'N

Longitude: 162°19.0'W

Oil Product: unknown petroleum product

Oil Type:
Type 1 or Type 2, probably

Quantity: unknown

Source of Release: Possible onshore Facility

Resources at Risk:

Birds-waterfowl

Other Special Interest:
None

Keywords:

Saturated beach

Incident Summary:

On Dec. 4, 1992, the Coast Guard was notified of a small sheen appearing on King Cove Lagoon, and the sheen seemed to be coming from the Peter Pan Foods tank farm on the barrier portion of the lagoon. Peter Pan never accepted responsibility for the fuel release, but it deployed 300' of harbor boom, along with sorbent boom and pads, around the beach area the was causing the sheen. Samples of the sheen were obtained and sent to the CG Coil Lab. Peter Pan Sefoods and the city of King Cove completed digging a recovery trench approximately 150' in length paralleling the area of the beach that was sheening. The trench encountered contaminated soil prior to encountering the water table. Approxiamtely 17 gallons of product were obtained in the recovery trench. The incident lasted for several days during which the winds ranged from light to 45 knots.

Behavior of Oil:

A sheen was the only observed form of the fuel. Roughly 17 gallons were collected in the recovery trench. Samples of the sheen were insufficient to provide for any distinctive fingerprint.

Countermeasures and Mitigation:

The affected shoreline was isolated with a boom, and a trench was dug to the water table to capture as much fuel as possible. To date, no flushing has occurred to attempt to maximize the fuel recovery. Nevertheless, the Coast Guard is not particularly happy with the placement of the trench and is continuing to negotiate with Peter Pan and the city of King Cove regarding this matter.

Other Special Interest Issues:

See D

NOAA Activities:

NOAA was brought into the incident almost immediately after the Coast Guard notification and was asked to provide information on the weather and any possible resources at risk. The USFWS replied that their might be <1000 waterfowl in the lagoon possibly including some steller eiders, which are a threatened species. The ADF&G concurred and added that there might possibly also be some emperor geese. Both agencies and NMFS indicated that there might possibly be some sea otters in the lagoon. On-scene observations by the Coast Guard revealed only a handful of small dark waterfowl up at the head of the lagoon.

References:

1. NWS, Anchorage
2. Ron Britton, USFWS, Anchorage
3. Claudia Slater, ADF&G, Anchorage
4. Brad Smith, NMFS, Anchorage

Name of Spill: F/V Phoenix

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 04/12/93

Location of Spill: Umnak Island, Aleutians, between Twin Lava Pt. and Derby Pt.

Latitude: 53°10.5'N

Longitude: 168°47.9'W

Oil Product: diesel

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 7000 gallons

Source of Release: Fishing Vessel

Resources at Risk:

Marine mammals: Seal haul out several miles away

Other Special Interest:
None

Keywords:

None

Incident Summary:
On the morning of April 12, 1993, the Coast Guard received a report of the F/V Phoenix floundering just off shore of Umnak Island. The vessels rigging had become entangled in the rudder, and the it was drifting helplessly towards the rocky shoreline on the NW side of Umnak Island with 7000 gallons of diesel on board. The western winds grounded and holed the vessel, and over the next 2-3 days all of the fuel was lost. A Coast Guard litering/salvage arrived from Dutch Harbor only to confirm the complete loss of the fuel. Coast Guard overflights at various times reported a mile or more of sheen which was rapidly dissappating as west winds up to 35 knots dispersed the diesel against the rocky shoreline. . No wildlife were observed in the area.

Behavior of Oil:

Winds up to 40 knots rapidly dispersed the diesel at sea and against the rocky shoreline. No areas or wildlife were impacted, and the total fuel cargo of 7000 gallons of diesel was released.

Countermeasures and Mitigation:

Due to the remoteness, it was impossible to employ any countermeasures and mitigation.

Other Special Interest Issues:

None

NOAA Activities:

The NOAA SSC support was entirely by phone and via direct interaction with the MSO personnel handling and monitoring the incident. They were kept abreast of weather conditions and possible wildlife occurences. The support continued for four days.

References:

1. NWS, Anchorage, personal communications throughout the incident.
2. Claudia Slater, ADF&G, Anchorage.
3. Brad Smith, NMFS, Anchorage.
4. Ron Britton, USFWS, Anchorage.

Name of Spill: F/P All Alaskan

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 072494

Location of Spill: Unimak Pass, east end of Aleutian Island chain

Latitude: 54,40,N

Longitude: 165,18,W

Oil & Chemical Product: Diesel and ammonia

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: approximately 10,000 gallons diesel and 38,000 # of ammonia

Source of Release: fish processing Vessel

Resources at Risk:

Seabirds: murres, kittiwakes,tufted puffins , etc.
Marine mammals: sea otters, sea lions
Stellar Sea Lion Critical habitat

Other Special Interest:
None

Keywords:

Diesel, ammonia

Incident Summary:

On Sunday morning, July 24, 1994, a fire broke out in the fore section hold of the F/P All Alaskan, a 350' vessel processing salmon. The vessel was located approximately 10 miles west of Cape Sarichef on the western side of Unimak Island and was riding in relatively calm seas. Initially, the attention of the Coast Guard was directed to a SAR mission as the 133 crew members of the vessel had to don float coats, enter life rafts and be picked up. This was successful accomplished with the exception of one individual who died while attempting to deal with the fire. The fire caused the failure of a 10,000 gallon diesel day tank on the fore deck as well as causing the explosion, release and fire of most of the 38,000 lbs of ammonia. The diesel release resulted in a reported eight mile long sheen which dissapated within 12 hours. Desiring to more the vessel from the sensitive resources in the Unimak Pass vicinity, a bridle was fitted to the stern of the vessel, and it was slowly towed westward to deeper water in case scuttling the vessel was necessary. On board the vessel were 126,000 gallons of diesel fuel, 7 bottles of acethlene, 12 bottles of oxygen, 10,000 gallons of lube oil, 8 drums of hydraulic oil, and 2 drums of gasoline in addition to the ammonia and diesel in the day tank. The fire blaze subsided by Monday, July 25, although smoldering continued in the fore peak holds of the vessel. Three Coast Guard cutters were summoned to the scene for assistance, and several members of the Pacific Strike team were brought to the scene. On Tuesday, July 26, the vessel was brought into Captain's Bay

at Dutch Harbor where final subpression of the fire and a thorough evaluation of the vessel could be accomplished. After the initial diesel release from the day tank on July 24, additional oil pollution was a low probability as the integrity of the fuel tanks and hull were not threatened by the fire. One bottle of ammonia was found to be slowly leaking after the vessel was brought into Captain's Bay with the balance believed lost while the vessel was burning at sea. As the vessel cooled down and aired out, the response phase was replaced with a vessel integrity evaluation phase. Navy SupSal and representatives of the vessel were primarily involved in this phase.

Behavior of Oil:

An eight mile long sheen of diesel resulted from the loss of the 10,000 gallon day tank on the fore deck. No areas were impacted, no response was attempted, and the sheen dissapated and dispersed within 12 hours.

The ammonia was largely released and consumed in the initial conflagration. It was reported that bottles were heard exploding, and ammonia is certainly flammable. When the inital evaluation of the All Alaskan was carried out in Captain's Bay, only 3000 pounds of the inital 38,000 pounds of ammonia remained.

Countermeasures and Mitigation:

No response countermeasures were attempted in dealing with the transient nature of the diesel spill. As ammonia was being released in the fire, and the potential existed for additional oil releases, the most effective mitigation used was towing the vessel westward as far away from land and sensitive resources as possible. Once the vessel was towed into Captain's Bay, the chemical hazards from ammonia were constantly evaluated and bottles of ammonia, chlorine, acetylene, etc. were secured.

Other Special Interest Issues:

None

NOAA Activities:

The SSC was notified on Sunday afternoon of the incident and asked to provide weather and resources at risk information. As a result, the CG was informed that the weather would remain generally fair with light winds. Also that this area was part of a Stellar sea lion critical habitat and the islands, islets, and rookeries were all part of the Alaska Maritime National Wildlife Refuge, Aleutian Unit and included large numbers of sea birds, sea lions and sea otters. Two reports were prepared for the FOSC detailing the specific locations, species, and numbers of resources at risk in the vicinity. Initially there was concern that larger quantities of diesel fuel and lube oil might be released, and the FOSC asked NOAA about the possibility of using dispersants on this combination. The reply was that After the initial diesel release, the CG had me mainly involved in helping to answer two questions, 1.) the ammonia releases and safe distances and 2.) finding a safe location to anchor the vessel for detailed assessment after the fire had been subpressed. Several ALOHA plumes were run and a plume IDLH (500 ppm) distance as a function of ammonia released was developed to give the FOSC information to help him deal with the situation. In addition several 100 ppm and 200 ppm ALOHA plumes were run and used for CG presentations to the people living in Dutch Harbor to familiarize them with the possible effects of a release of ammonia while moored at Dutch Harbor. Charlie Henry was consulted regarding the interaction of fire and ammonia, and it was learned that even though ammonia may be labeled as "non flammable", it is in fact quite flammable. For the first 5-6 days after the initial fire, the SSC provided daily status reports to the resource agency folks, and regularly interacted with them for the first couple of days when scuttling of the vessel was a possibility being considered by the Coast Guard. The NOAA response was entirely by phone and fax and lasted approximately five days.

References:

1. Ron Britton and Evert Robinson-Wilson, USFWS, Anchorage.
2. Mark Fink and Robin Willis, ADFG, Anchorage
3. Brad Smith, NMFS, Anchorage
4. Pam Bergmann, DOI, Anchorage
5. NWS, Anchorage
6. Charlie Henry, LSU Environmental Studies Institute, Baton Rough, LA
7. CAMEO Response Information Data for Ammonia, software developed by NOAA Hazmat, Seattle.
8. Gary Hufford, NWS and alternate DOC representative to Alaska RRT

Name of Spill: M/V Northern Wind

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 072395

Location of Spill: Northern side of Sequam Island, Aleutian Island chain, Alaska

Latitude: 52,22.7,N

Longitude: 172,26.0,W

Oil Product: Diesel

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 20-25K gallons

Source of Release: Non-Tank Vessel

Resources at Risk:

Marine Mammals: Stellar Sea Lion rookery 6 miles from vessel grounding site. The sea lion is on the threatened species list

Other Special Interest:
None

Keywords:

Diesel, threatened species

Incident Summary:

The M/V Northern Wind, a 178' fish processing vessel, ran aground on the northeastern side of Seguam Island holing the #1 port and starboard fuel tanks which were carrying approximately 60,000 gallons of diesel fuel. Arctic Alaska Seafoods in Dutch Harbor organized a spoill response team and equipment and sent it all to the grounding site via the F/T American Enterprise. Within 12 hours the vessel floated free from the rocks and anchored one-half mile from the grounding site. An estimated 20-25K gallons of diesel were lost, and the response vessel pumped about 20-25K gallons from the two damaged tanks. An additional 75K gallons of diesel remained in the undamaged stern tanks. The CGC Morgenthau was on scene throughout the incident. For temporary repairs permission was granted to move the vessel 70 miles west to a sheltered bay on the east side of Atka Island. Initially the winds were NW to 20 knots but diminished to light and variable for the duration of the incident. The Coast Guard was heavily involved in monitoring and directing the vessel's response, which lasted for appriximately 5 days.

Behavior of Oil:

Aerial observations by the Coast Guard after the fuel release indicated a maximum slick of 3 n.m. by 3 n.m. that was rapidly disappating and breaking up due to wind and wave action, as would be expected from diesel. Pilots further reported that roughly 4 n.m. of beach was lightly affected by the oil. A beach survey conducted by the vessel owner four days after the release indicated no shoreline effects or accumulations.

Countermeasures and Mitigation:

As soon as boom arrived on scene the vessel was boomed off. The remaining 20-25K gallons of diesel in the damaged tanks was lightered to a response vessel, after which the vessel was moved to Nasan Bay on Atka Island for temporary repairs.

Other Special Interest Issues:

None

NOAA Activities:

NOAA was notified of the incident Monday morning, July 24, 1995, after the release had occurred and after the situation was stabilized with the vessel anchoring one-half mile offshore from the grounding site. At that time concern was expressed by NMFS for possible impacts on the sea lion haul-out six miles to the west and the need to heed the three mile buffer zone around this haul-out, a measure that has been instituted with the threatened status of the stellar sea lion. Running ADIOS indicated that most of the diesel would disperse and evaporate within 12 hours, a fact which dramatically decreased the probability of interaction between the diesel and the sea lions. Otherwise, the concern was for safely moving the vessel to a sheltered bay on Atka Island for temporary repairs. For this proposed effort weather and resources-at-risk information was provided to the Coast Guard. The fact that the weather outlook called for light and variable winds with few resources in the area boded good for the vessel movement. Also, I was able to relate to the Coast Guard that the USFWS R/V Tiglax planned to transit from the Shumagin Island to Seguam to check for impacts. They reported that no evidence of oil was seen on the beach or on any of the sea lions present. NOAA support continued intermittently for 2-3 days.

References:

1. Brad Smith, NMFS, Anchorage
2. Ron Britton, USFWS, Anchorage
3. Pam Bergmann, DOI, Anchorage
4. NWS, Anchorage
5. Doug Mutter, DOI, Anchorage

Name of Spill: F/V Rebecca B

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 102496

Location of Spill: south side of Tanaga Island in the Aleutian Island chain

Latitude: 51,36,N

Longitude: 177,57,W

Oil Product: Diesel

Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 1000 gallons spilled

Source of Release: Non-Tank Fishing Vessel

Resources at Risk:

Marine Mammals: stellar sea lions; National Wildlife Refuge

Shoreline Types Impacted: ??

Other Special Interest:
None

Keywords:

diesel

Incident Summary:

Due to very inclement weather conditions, the 77' F/V Rebecca B fetched on a shoal 50 feet off the beach in a protected cove on the south side of Tanaga Island. The vessel had 1500 gallons of diesel onboard, and the onboard vents were plugged prior to the crew evacuating the vessel. The crew was rescured by a Navy tug and taken to Adak, and Magone Marine out of Dutch Harbor was hired for salvage. Initially the hull was intact, and there was no pollution. It wasn't until Oct. 30 that the weather improved enough to allow an overflight buy the owner rep and Nagone. They reported the vessel is hard aground, decks awash, vessel had a starboard list, but there was no pollution. Magone was unable to get a salvage vessel on-scene until Nov. 23, at which time the remaining 425 gallons of diesel were removed. The starboard tanks had been destroyed by the weather and the wave action releasing roughly 1000 gallons to the environment, although no pollution was observable. The salvor then proceed to cut up the vessel for removal from the beach. Winds during the incident ranged up to 50-60 knots. MSD Unalaska monitored the incident throughout.

Name of Spill: F/V Lisa Jo

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 021997

Location of Spill: Akun Bay at Akun Island, Aleutian Island Chain

Latitude: 54,12.7,N

Longitude: 165,28.9,W

Oil Product: diesel

Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 1200 gallons

Source of Release: Fishing vessel

Resources at Risk:

None

Other Special Interest:
None

Shoreline Types Impacted:

exposed bedrock cliffs

Keywords:

Incident Summary:

The F/V Lisa Jo, a 77' craft, ran hard aground in Akun Bay on the north side of Akun Island in the early morning of Feb. 19, 1997. The vessel had roughly 1200 gallons of diesel onboard. The craft maintained its integrity for less that a day as high north winds caused it to breakup and disgorge its entire contents of diesel. The vessel was considered a total loss. The CGC Mellon stood by offshore and helped in the rescue of the captain. Overflights on the second day revealed considerable sheen around the vessel. No birds or marine mammals were noted in the immediate vicinity of the grounded vessel. No response was possible or necessary. Throughout the incident strong winds from the northern quadrant pounded the craft.

Behavior of Oil:

High winds caused the diesel to rapidly disperse and evaporate.

Countermeasures and Mitigation:

None

Other Special Interest Issues:

None

NOAA Activities:

The NOAA SSC was notified of the incident on the morning of Feb. 19 and asked to track the incident for the benefit of the resource agencies, particularly the NMFS which is the trustee for the threatened sea lions, which frequent this area. The diesel release did not threaten the two sea lion rookeries on the very northern edge of Akun Island. Communications between MSD Unalaska and NMFS were maintained to provide an open information flow.

References:

1. Brad Smith, NMFS, Anchorage
2. Lt. Chris Woodley, MSD Unalaska, Dutch Harbor
3. NWS, Anchorage

Name of Spill: M/V Kuroshima

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 112697

Location of Spill: Summer Bay and Summer Lake, Unalaska Island

Latitude: 53,55,N

Longitude: 166,25,W

Oil Product: IFO 380

Oil Type:

Type 4 - Heavy Oils (heavy crude oils, No. 6 fuel oil, bunker c)

Quantity: 47,000 gallons were released; 69,600 gallons were lightered to temp. storage

Source of Release: Non-Tank Vessel

Resources at Risk:

Habitat: salmon spawning in fresh water lake and feeder stream
Sea otters, sea lions and seals in Summer Bay and Iliuliuk Bay
Birds: gulls, eagles, murres, emperor geese, eiders and other seabirds
Intertidal Community: sea urchins, mussels, chitons, limpets, etc.
Subsistence Use: Aleut native collection and consumption of invertebrates , some sea ducks and edible plants
Recreation: Summer Bay Beach and Summer Bay Lake are major summer recreation use areas for local folks
Cultural: an archaeological site (early man in the Aleutians) was affected

Other Special Interest:

Winter time response meant working around snow, ice, and high wind conditions, which mostly were responsible for retarding progress. The whole cleanup was interrupted in late December due to freezing, snow, and cold weather conditions and was not re-commenced until spring time.

An unusual cleanup technique involved taking advantage of a thermal treatment unit located in Dutch Harbor by the U.S. Army Corp of Engineers, which had a contract for treating petroleum-contaminated soil from formerly used defense sites (FUDS). Approximately 2000 tons of oiled beach sand were treated in this FUDS facility before returning the "cleaned" sand to Summer Bay beach.

Shoreline Types Impacted:

Shoreline types ranged from coarse sand and gravel beaches to exposed bedrock cliffs, exposed rocky shores, freshwater marshes, sheltered sandy beaches, and sheltered rocky shores

Keywords:

Power washing units, weed cutters, salvage, reoiling, propane cannons, in-situ burning,

Incident Summary:

Accident Scenario:

The Japanese cargo vessel, M/V Kuroshima, had been anchored outside Summer Bay near Dutch Harbor for over three weeks awaiting to take on fisheries cargo when a big storm with northerly winds hit on November 26. After dragging both anchors, the captain decided to weigh anchor and move the ship. By then, winds had built to 40 to 50 knots with gusts up to 90 knots and seas of 28-30 feet. Residents reported seeing the vessel pitching severely in the water starting the morning of November 26: "....from the front beach in Unalaska, we could see her stern rise so sharply as to expose her props and rudder." (*The Dutch Harbor Fisherman, Dec. 18).* The vessel broke anchor and ran aground near Second Priest Rock at 3:05 pm November 26. Two crew fatalities occurred during the grounding. The ship ended up on the beach in Summer Bay just west of the outlet of Summer Bay Lake, with the port side to the beach. The huge storm waves caused a surge that propagated up the stream channel, under the bridge, carrying oil into the lake, all the way to the south end of the lake. A city of Unalaska employee obtained heavy equipment to build an earthen dike at the lake outlet to prevent more oil from flowing into the lake.

Oiling Conditions:

Summer Bay Lake: Thick stable mousse coating along lake perimeter, matted into vegetation (then covered by water of rising lake, and frozen over). Heaviest at southeast and northwest corners. Sunken oil patties observed under the bridge and on the bottom of the lake (confirmed after a spring diving survey).

Summer Bay Beach: Surface and buried oil layers in sand (up to 5-7 centimeters thick). Dune wild rye grass and sand surface on dunes lightly oiled. Coat of oil up to several centimeters thick on cut bank along streamlet leading from lake to Bay.

Morris and Humpy Coves & Rocky shorelines east of Summer Bay: Oil mats, tarballs, and oiled debris washed up on these beaches

Archaeological Resources: Very important archaeological resources and sites exist in the vicinity of the spill. An important unexcavated early man/pre-Aleut dwelling site is located near Summer Bay, just upland of the grounding location in a dune valley. Large globs of oil were reported to have blown into and contaminated this site. There are also archaeological sites in Humpy Cove. These sites were not contaminated by the spill. An archaeologist from Anchorage worked under the FOSC and participated in the SCAT surveys of all areas containing archaeological resources.

Clean Up:

Summer Bay Lake: mostly manual removal with shovels, rakes, pitch forks, and clippers; minor mechanical cleanup and power washing mostly in NE and NW corners; divers with bags and hand implements picked up the sunken oil from lake bottom.

Summer Bay Beach: mostly mechanical excavation and manual removal of surface oil and buried oil layers with thermal treatment at FUDS ; oiled logs were removed and burned.

Morris and Humpy Coves and rocky shoreline: oiled mats and debris were sacked with the sacks being transported to Oregon. Over 500 supersacks were filled and removed.

Archaeological Sites: The oiled arch. site at Summer Bay was not cleaned by the response workers, and instead, an agreement between the RP and the Ounalashka Native Corporation was struck to provide funds to further excavate this site. Information provided to clean-up workers regarding procedures for archaeological sites and any artifacts found during cleanup was very effective.

Due to winter conditions the clean up was temporarily halted on Dec. 20 and not re-commenced again until the middle of April. Final shoreline cleanup and SCAT sign off occurred by the end of May; however, minor additional cleaning during the month of June was necessary as minor amounts of oil surfaced.

The responsible party established a full incident command system and had over 100

clean up workers working on the spill. They hired ERST/O'Brien's to manage the spill and Beak Environmental to handle scientific and technical response questions including leading the SCAT team. Federal and State folks were fully integrated into this command structure, and despite differing roles, everyone seemed to generally work together as a team.

Lightering and Salvage:

A temporary tank farm was established onshore to liter the remaining fuel in the vessel. Final lightering was not accomplished until roughly two weeks after the incident as weather, wind, tank clingage, etc. all hampered the lightering operations. 69,600 gallons of IFO-380 were pumped off the ship into the temporary tank farm.

On March 1, 1998, salvors finally refloated the freighter Kuroshima. It took three salvage companies three months to free the hard-aground vessel. After securing and cleaning the vessel, Crowley Marine Company, the original contractor, used shore-based excavators, a series of beach gear anchors and winches mounted on the Kuroshima's deck, and the line pull from Crowley's salvage vessel, American Salvor, to turn the Kuroshima 90 degrees and pull it several meters out to sea, before the contract with the ship owner expired on Feb. 15. Smit Americas won the second salvage contract and succeeded in freeing the Kuroshima using two barge-mounted excavators, the prop wash from several tugs to dig the vessel from the sand, and the Kuroshima's own anchor winch and engines. Both Crowley and Smit subcontracted substantial work to Magone Marine of Dutch Harbor. No pollution occurred during the salvage operation.

Wildlife Impacts:

Summer Bay Lake and the stream flowing into the lake are important anadromous fish spawning and rearing habitats for limited numbers of sockeye, pinks, dolly varden and silver salmon. Generally, the clean up period from late November through May does not coincide with the active spawning period for these fish. Impacts should therefore be minimal, but remain to be seen for certain. July, '98 reports indicate that salmon returns and fishing have been outstanding.

Birds: The number of oiled birds collected was somewhat less than 150. Of these, 18 were shipped live to Homer for rehabilitation, of which two survived. Oiled birds included eagles, gulls, murres and other seabirds.

No observations or reports of oiled marine mammals occurred.

Behavior of Oil:

The spilled oil was an IFO-380, which is comprised of roughly 25% diesel and 75% Bunker C. The lighter component evaporated rapidly as evidence by a petroleum aroma during the first week. During the initial release nearly all the oil was driven onshore and deposited as very thick, viscous, stable mats and patches of mousse. Chemical analysis by LSU revealed a very stable emulsion with a highly retarded weathering rate and pronounced wax component, suggesting strong similarity to oil classified as LAPIO.

Movement of the oil on the water was limited to roughly a one weeks period after the stream dike was breached, washing a considerable amount of previously beached heavy, thick mouse oil patches back into Summer Bay. It is also believed that a small additional leak from the vessel occurred during this period. Prevailing winds carried the oil offshore and to the north where it was blown ashore into Humpy and Morris Coves and onto the intervening rocky headlands.

A small amount of the oil blown into Summer Bay Lake took on sand and sediment and sunk to the bottom mostly along the northern portion and some in the SE portions of the lake.

Countermeasures and Mitigation:

Covered in other sections

Other Special Interest Issues:

None

NOAA Activities:

On Thanksgiving Day, Nov. 27, the NOAA SSC accompanied the first contingent aboard a Coast Guard C-130 to Dutch Harbor to respond to the Kuroshima oil spill. Within several days this support was augmented with an information manager and a member of the Biological Assessment Team. From the onset to the winter stand-down on roughly Dec. 20 the different types of NOAA support included the following; 1.) mapping the impacted shoreline areas, 2.) mapping out floating oil and providing trajectories based on differing wind conditions, 3.) weather forecast support through a combined effort of the Seattle Hazmat office and the NWS in Anchorage, 4.) establishing the SCAT team protocols and representation, 5.) meeting with land owners/managers including the Native Corporation and the City of Unalaska, 6.) chemical analysis of the fresh and beached oil, 7.) assisted NOAA damage assessment personnel in sampling subsistence resources in the rocky area immediately east of Summer Bay for chemical analysis, 8.) and obtaining local knowledge regarding the utilization of the Summer Bay/Lake area for subsistence, fishing, hiking, skiing, bird watching, and other recreational purposes.

Over the winter preparations were made to restart the cleanup around the middle of April. The largest NOAA effort to date and continuing on into the spring was participation on the SCAT team. Over the winter several meeting were held with the RP -SCAT leader to finalize forms, procedures, personnel, and methods for the spring startup. As the federal rep on the SCAT, NOAA journeyed to Dutch Harbor during the first week in April to recommence the Kuroshima cleanup. For ten days prior to actual cleanup , the SCAT resurveyed all of the oiled shorelines and prepared work orders for all the oiled shoreline segments. The dominant cleanup technique involved manual labor with shovels, rakes, and clippers, although minor amounts of mechanical, power washing, and in-situ burning of oiled debris were utilized. A total of more than 500 super sacks of oiled rock and debris were collected and shipped by barge to an Oregon hazardous waste disposal site.

Since the oiled areas were primarily public use in nature, the clean up standards were quite high. The SCAT all acknowledged that the weathered bunker C was not toxic and posed little threat to the environment. Instead, the standard that was mostly followed was cleaning to a level where human visual and physical interaction with the oil had a very low probability. This resulted in a very labor intensive cleanup, and in some cases ten-man crews would only complete thirty feet of lake shoreline in a ten hour working day.

Other involvement of NOAA had to do with removal of oiled sand from Summer Bay beach for thermal treatment and determining the optimum times for returning the clean sand to the beach to prevent major beach erosion. A small scale test of Sphag Sorb indicated that it would still stick to the bunker C oil within the first few weeks after release. Consultations were conducted with local plant experts, University of Alaska experts, and other plant ecology experts in Alaska regarding the Summer Bay Lake plant communities and its sensitivity to cleanup activity. We learned that generally the plant community, dominated by wild rye grass, is fairly hardy. Oiling of the dead shoots and stocks in the middle of winter was fairly inconsequential. When the clean up ended in late May and early June abundant new growth and regeneration was occurring.

By the end, eight different individuals from NOAA Hazmat had on-scene involvement in the Kuroshima response, and there were at least that many supporting from outside locations. On-scene NOAA Hazmat personnel included John Whitney, Ruth Yender, Scott Stolz, Richard Wingrove, Chris Hall, Katie Dana, Al Hielscher, and Doug Helton. Other on-scene NOAA involvement amounted to personnel from the NWS in Anchorage, the Auke Bay NMFS lab, and the Anchorage NMFS office.

References:

1. Dave Goldstein and Greg Matzen, NWS, Anchorage
2. Stoney Wright, State of Alaska Plant Materials Center, Palmer, Alaska
3. Jacqui Michel, Research Planning Institute, Columbia, SC
4. Miles Hayes, Research Planning Institute, Columbia, SC
5. Catherine Berg, USFWS, Anchorage
6. Charly Stock, ADFG, Unalaska
7. Rance Morrison, ADFG, Unalaska
8. Mark Fink, ADFG, Anchorage
9. Tammy Olson, ADFG, Anchorage
10. Charlie Henry, LSU Environmental Institute, Baton Rough, LA

Name of Spill: F/V Controller Bay

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 050899

Location of Spill: North side of Unimak Island at Cave Point

Latitude: 54,48.2,N

Longitude: 164,36.1,W

Oil Product: diesel, hydraulic fluid, and lube oil

Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 6000 gallons diesel
600 gallons hydraulic fluid
250 gallons lube oil

Source of Release: Non-Tank Vessel

Resources at Risk:

Stellar sea lion rookery approximately 1 mile west of Cave Point

Other Special Interest:
None

Shoreline Types Impacted:

Rocky, wave-cut platforms

Keywords:

diesel, no response

Incident Summary:
The 78' F/V Controller Bay went aground early morning, May 8, at Cave Point on Unimak Island when the master fell asleep at the wheel with vessel on autopilot. Roughly 7000 gallons of fuels leaked from the vessel producing a sheen about 50 feet wide and a mile long stretching off to the north and east. The four members of the crew were rescued by another fishing boat. Heavy weather and high winds persisted throughout the area and contributed to the accident. On-scene conditions of 24' seas were reported. On a May 10 Coast Guard overflight the vessel was reported to be severely damaged and breaking up and only the stern was visible. The powerful storm made it impossible to unload the fuel before the vessel broke up on the rocks.

Behavior of Oil:
High winds and heavy seas naturally dispersed the oil as it leaked from the vessel

Countermeasures and Mitigation:

Due to heavy weather conditions, countermeasures were impossible to employ

Other Special Interest Issues:

NOAA Activities:

NOAA's involvement in the response was restricted to phone and fax as the Coast Guard requested information on weather and resources at risk. NOAA confirmed that heavy weather and high winds persisted throughout the area of the incident and would continue for several more days before abating. Discussions with the resource agencies revealed the existence of a sea lion rookery roughly one mile west along coast from Cave Point. However, with coming from the west and northwest, oil sheening off the grounded vessel in an easterly direction, was expected to have no effect on the rookery.

References:

1. NWS Anchorage
2. Brad Smith, NMFS, Anchorage

Name of Spill: M/V Redfin

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 051099

Location of Spill: Cold Bay, Alaska Peninsula

Latitude: 55,06.43,N

Longitude: 162,31.63,W

Oil Product: Diesel and lube oil

Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Quantity: 100,000 gallons diesel
several hundred gallons of lube oil

Source of Release: Non-Tank Vessel

Resources at Risk:

Anadromous streams

Other Special Interest:
None

Shoreline Types Impacted:

Sheltered rocky shores and gravel beaches

Keywords:

Diesel, no response

Incident Summary:
In the early morning hours of May 10, 1999, the 178' freighter Redfin, owned by Western Pioneer of Seattle, ran aground at the entrance to Cold Bay incurring a small hole in the bow of the vessel. Roughly 100 gallons of lube oil and diesel leaked from the vessel. It was taking on water in the bow thruster space, although bilge pumps were neutralizing that inflow. Eventually 22,000 gallons of fuel were transferred from the fore to the aft tanks. After lightering approximately 40,000 gallons of fuel to the tug Alaskan Mariner, the Redfin floated free at the high tide. No further lose of fuel occurred.

Behavior of Oil:
The fuel in the water dissipated and dispersed naturally.

Countermeasures and Mitigation:
No countermeasures were employed

Other Special Interest Issues:

None

NOAA Activities:

NOAA was kept appraised of the Redfin incident as it developed and was asked only to monitor the weather conditions and predictions. Weather was fairly decent during the grounding and was predicted to stay the same for the next several days.

References:

1. NWS, Anchorage

NOAA Response Report

M/V Global Sunshine
Island of the Four Mountains, Bering Sea
January 7, 1986

Skip Fox, Scientific Support Coordinator

INCIDENT SUMMARY

On January 6, 1986 the USCG/MSO in Anchorage was informed that the Korean grain freighter Global Sunshine, carrying 300,000 gallons of #5 fuel oil, had lost power and was adrift 70 miles west of Island of the Four Mountains in the Bering Sea..

NOAA RESPONSE

NOAA/OAD was notified of the incident at 1300 on January 7, 1986, by the U.S. Coast Guard Marine Safety Office, Anchorage, and requested to predict the trajectory of the drifting vessel, and advice of any resources at risk should the ship ground before tugs could reach her. NOAA/OAD advised that the Global Sunshine would not make landfall for approximately five days, by which time the Foss tug en route would have reached the vessel.

FINAL DISPOSITION OF THE INCIDENT

The Foss tug was able to reach the Global Sunshine before she drifted onto the shoals, and kept the vessel offshore until the Japanese ocean tug Arvs arrived to tow the vessel to Japan for repairs.

BIBLIOGRAPHY

Galt, Dr. Jerry, National Oceanic and Atmospheric Administration, Seattle, Washington, personal communication, January 7, 1986.

Michel, Dr. Jacqueline, Research Planning Institute, Columbia, South Carolina, personal communication, January 7, 1986.

NOAA Response Report

M/V Tempest
Unimak Island, Aleutian Islands, Alaska
January 29, 1987

John Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On January 28, 1987, the USCG Anchorage was notified that the M/V Tempest, a 297' fish processing vessel owned by Trident Sea Foods Corporation, had suffered an explosion. The blast occurred below deck in the engineering room producing a one foot by three foot hole in the hull above water line and causing a loss of steering. At the time the vessel was on the south side of Unimak Island with gale winds from the south and southeast. Potential polluting agents onboard included a large quantity of fuel, chlorine and ammonia.

NOAA RESPONSE

On January 28, 1987, at 1200 (AST) NOAA Anchorage was notified and was requested to standby with possible scientific support information should it be required. As Unimak Island is part of the Alaska Maritime National Wildlife Refuge, Howard Metsker of the U.S. Fish and Wildlife Service was contacted. He indicated that at this time of year there basically are no wildlife populations that would be affected.

FINAL DISPOSITION OF THE INCIDENT

Shortly after being notified of the potential incident, the Coast Guard dispatched the CG cutter Acona to the scene. The free-drifting M/V Tempest was able to hold on its anchor chain six miles off land. In this location, it was able to affect repairs sufficient enough to negotiate to Sand Point where permanent repairs could be undertaken. The cutter Acona checked the stricken vessel and escorted it to Sand Point. No cause for the explosion was immediately ascertained. Case was closed on January 29, 1987.

REFERENCES

1. Phone contact with Howard Metsker, USFWS, on 1/28/87.

ALASKA

M/V Prince William Sound
Dutch Harbor, Alaska
April 22, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

On the afternoon of April 22, 1991, the M/V Prince William Sound, a 180' fish processing vessel, caught fire while moored at Captain's Bay at Unalaska Island. The cause of the fire was determined to be from a welding operation in vessel tool room, which caused a fire in the adjacent packing boxes. An estimated 135,000 gallons of diesel fuel was onboard at the time of the incident along with limited quantities of oxygen/acetylene/ammonia bottles, 10 bbls of lube oil, and 7 bbls of gasoline were stored on deck. Attempts to suppress the fire by the local fire department were not successful, and it was decided to tow the burning vessel out to sea a save distance northwest of Unalaska Island. The Coast Guard cutter Mellon happened to be on-scene.

NOAA RESPONSE

The NOAA SSC was contacted Monday night, April 22, while in Valdez and informed of the incident. At the time, the pertinent information requested was how far offshore the vessel should be towed such that a possible full release of the 135,000 gallons of diesel would not impact any coastal resources. After consulting with MASS in Seattle and the National Weather Service, the Coast Guard was advised that a distance of ten miles northwest of Unalaska Island would provide an adequate buffer zone.

CONCLUSION

The subject vessel was towed approximately 15 miles offshore where the tow line parted and the fire continued. By Wednesday, April 24, the tow had been regained, and the fire had pretty well burned out. As no black smoke had emanated from the burning vessel, it was thought that the diesel fuel tanks were still intact, a condition that was confirmed when the vessel was boarded on the following weekend. In addition the structural integrity of the vessel was confirmed. The owner, Trident Seafoods, then towed the vessel to its facilities at Akutan Harbor where the fuel was safely pumped off, and plans were made to tow the vessel to Seattle for repairs.

CONTACTS

1. Glen Watabayashi, NOAA Hazmat, Seattle, personal communication, 4/22/91.

2. National Weather Service, Anchorage, 4/22-4/26/91.

3. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, 4/23/91

4. Claudia Slater, ADF&G, Anchorage, personal communication, 4/23/91.

Alaska

M/V Hyundai #12
Shumagin Islands
October 2, 1991

John W. Whitney, Scientific Support Coordinator

INCIDENT SUMMARY

While attempting to negotiate the Shumagin Islands after it had taken shelter there from a storm, the M/V Hyundai #12, a 515' Korean cargo vessel carrying 23,000 tons of wheat from Portland to Hong Kong, ran aground a rock pinnacle in Twelve Fathom Strait (54°57.4'N, 159°21.5'W) on October 2, 1991. The Shumagin Islands comprise part of the Alaska Maritime National Wildlife Refuge, and Twelve Fathom Strait is along the north side of Simeonof Island, which is designated a wilderness area. The vessel was carrying 4150 Bbls (174,000 gallons) of IFO-180 CST fuel and approximately 500 Bbls (21,000 gallons) of diesel in the engine room. Initially only one bottom fuel take was breached. However, there was no oil leak as a hydrostatic head of water held the fuel up in the tank. Personnel from the Pacific Strike Team were activated.

NOAA RESPONSE

The NOAA Hazmat office in Anchorage was notified of the incident on the evening of October 2. The resource agencies were all notified and asked to indicate their concerns. The USFWS, manager of the wildlife refuge, noted that most of the birds were gone this time of year but that significant populations of overwintering seabirds and sea otters could be expected. Their biggest concerns were respecting the wilderness designation of Simeonof Island, and not allowing any possible rats on board the Hyundai to get ashore and decimate the bird populations. The NMFS noted that three active sea lion rookeries were in the immediate area at Atkins Is., Chernabura Is., and Sealion Rocks. The ADF&G noted a few salmon streams on the adjacent islands.

With the potential for a large release the FOSC desired to prestage as much mechanical, in-situ burning, and dispersant equipment as desirable and suitable, and I was tasked with investigating the latter two types of response. After initial inquiries led to the conclusion that its viscosity was 180 centistokes, it was concluded that it was both dispersible and burnable. The Coast Guard was so advised, and NOAA helped facilitate the completion of the dispersant and in-burning checklists for the RRT. After the RRT had given its approval for these types of contingency response, it was learned that the IFO, which is a mixture of Bunker C and diesel, really

had a viscosity of 180 centistokes at 120°F and that its viscosity at the ambient water temperature of 47°F was between 5000 and 20,000 Cst, which makes the fuel undispersible and more difficult to burn. As a result, this type of equipment was never staged.

Throughout the incident the CG was kept abreast of the weather and tidal conditions, and even the owner became enamored with the Harbor Master presentation of the tidal information.

CONCLUSION

The owner took full responsibility for the salvage and response, and staged several fishing vessel, several thousand feet of boom, a large salvage vessel, and a barge from Dutch Harbor to pump the fuel into. The Coast Guard had three cutters responding to the incident: CGC Acushnet, Sweetbriar, and Sedge. Strike team personnel and pumps were used to offload the IFO. In addition, the owner brought in two huge 40 ton/hr grain pumps from Portland to pump the wheat overboard in an effort to lighten the vessel. After an estimated 112,000 gallons of IFO and 1000 tons of wheat were removed, the vessel floated free on the evening high tide on October 12. Under its own power, it maneuvered to Sand Point, 50-60 miles away and a sheltered haven for conducting hull surveys and temporary repairs. Ulimately, only minor sheening was reported with no release of black oil.

CONTACTS

1. Ken Barton, NOAA Hazmat, Seattle, personal communication, 10/2-4/91

2. NWS, Anchorage, personal communication, 10/2-12/91.

3. Peggy Dyson, NWS, Kodiak, personal communication, 10/2/91

4. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, 10/3-14/91.

5. Evert Robinson-Wilson, USFWS, Anchorage, personal communication, 10/3-10/91.

6. Brad Smith, NMFS, Anchorage, personal communication, 10/3-10/91.

7. Chris Swenson, ADF&G, Anchorage, personal communication, 10/3-10/91.

8. Carl Lautenberger, EPA, Anchorage, personal communication, 10/4/91.

9. Jim Meitner, Tesoro, Anchorage, personal communication, 10/3/91.

10. Brian & Melody McKie, FGS Commercial Testing and Engineering Survey Co., Nikiski, personal communication, 10/3-10/91.

11. Bill Lehr, NOAA Hazmat, Seattle, personal communication, 10/3/91.

12. Mike Bronson, America North Co, Anchorage, personal communication, 10/3-7/91.

13. Charlie Henry, LSU Environmental Studies Institute, Baton Rouge, personal communication, 10/5/91.

14. Norm Ingram, Alaska Clean Seas, Anchorage, personal communication, 10/7/91.

15. Burl Wescott, Cook Inlet Spill Prevention & Response, Inc., Kenai, personal communication, 10/7/91.

16. Jack Gallagher, owner's oil spill consultant, Sand Point, personal communication, 10/4-9/91.

17. Doug Davis, Bradbury, Bliss & Riordan, Anchorage, personal communication, 10/5-9/91.

18. Jerry Galt & Glen Watabayashi, NOAA Hazmat, Seattle, personal communication, 10/3-8/91.

19. Ron Britton, USFWS, Anchorage, personal communication, 10/8/91.

20. Alan Allen, Spiltec, Inc., Seattle, personal communication, 10/5/91.

Alaska

F/V Sunset Bay
Unimak Island, Aleutian Island Chain
November 11, 1991

John W. Whitney, Scientific Support Coordinator

SUMMARY

On Sunday, November 10, 1991, the F/V Sunset Bay, a 128' crabber based out of Seattle, ran aground in Urilia Bay on the north side of Unimak Island as the result of high wind and seas. As the result of a dramatic Coast Guard rescue effort in this inclement weather, all six people aboard the vessel were saved. The vessel was laden with 30,000 gallons of diesel. However, on grounding no fuel tanks were breached, and the Coast Guard was fairly optimistic that no fuel would be spilled as this steel hulled vessel was aground on a soft sandy bottom.

NOAA RESPONSE

The NOAA Hazmat office in Anchorage was notified of the incident on November 11, 1991, and was initially advised that no assistance was necessary as a result of the steel-hulled construction of the vessel being aground on a soft bottom. Salvage efforts were attempting to pull the vessel into deep water at the daily high tide. My immediate response was to provide the Coast Guard with weather forecasts and outlooks together with upcoming tidal information. At the same time, a heads-up notification was given to the resource agencies. It was learned that this area was part of the Alaska Maritime Wildlife Refuge, and that although the large concentrations of birds had passed, there were still probably significant numbers of overwintering ducks, sea birds, and geese, particularly associated with Christensen and Peterson Lagoons on the edge of Urilia Bay. Sea lions and sea otters would also likely be found in the vicinity.

CONCLUSION

Daily efforts were made by the salvor to free the vessel at the daily high tide. However, the magnitude of this tide was decreasing each day, and efforts to lighten the vessel were accomplished by pumping off water and jettisoning the cargo of king crab. Finally, on the November 14 high tide the salvors were successful in refloating the vessel, leaving behind a huge pile of king crab dumped on the beach. No oil was released throughout the incident.

CONTACTS

1. NWS, Anchorage, personal communication, 11/11-14/91.

2. Claudia Slater, ADF&G, Anchorage, personal communication, 11/12-15/91.

3. Pam Bergmann, DOI Office of Environmental Protection, Anchorage, personal communication, 11/12-15/91.

4. Chris Dau, USFWS, Cold Bay, personal communication, 11/13-15/91.

5. Brad Smith, NMFS, Anchorage, personal communication, 11/13-15/91.

6. CAMEO SSC Oil Spill Response Program, NOAA Hazmat, Seattle, 11/11-14/91.

Potential Spill Report Format

We'd like to have a brief record of potentials that you work on. Please enter information (or circle appropriate category) below.

Name of Spill: F/P Komsomolskaya Smena

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 011895

Location of Spill: At Eider Pt on the north side of Unalaska Island, Aleutian Island Chain

Latitude: 53,57.0, N

Longitude: 166,35.0,W

Oil Product: Diesel

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Barrels: greater than 2400 barrels of diesel

Source of Spill: Non-Tank Vessel

Brief Description:

Vessel grounded at low tide on spit bar at Eider Pt., but floated free several hours later at high tide with the assist of a tug. No diesel was release into the water. NOAA provided tidal heights and currents and weather to the Coast Guard.

References:

1. Glen Watabayashi, NOAA Hazmat MASS group, Seattle

2. NWS, Anchorage

3. ADIOS, NOAA computer program for tidal heights and currents

Potential Spill Report

Name of Spill: F/V Provider

NOAA SSC: John W. Whitney

Date of Spill (mmddyy): 060696

Location of Spill: Yunaska Island, Aleutian Island chain

Latitude: 52,36N

Longitude: 170,38,W

Oil Product: Diesel

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)

Barrels: 12,700 gallons

Source of Spill: Non-Tank Vessel

Sunnary of Incident:

The 127' F/V Provider was under charter to a group of NMFS scientists who were conducting sea lion surveys along the Aleutian Islands. At Yunaska Island the vessel went aground on a rocky shoal, began taking on water, and was in danger of sinking. The scientist were disembarked onto the island, and a mayday signal was transmitted to the Coast Guard. Although no fuel was leaking due to the grounding, the vessel had 12,700 gallons of diesel on board. Fortunately the CGC Mellon was in the vicinity, and its crew were able to provide assistance to dewater the vessel. Meanwhile the vessel owners arranged for salvage divers and a tug to come to the scene to provide assistance. Salvage divers were able to apply several patches and keep the vessel from sinking. The CGC Mellon towed the F/V to a rendezvous with the tug, which continued to tow it to Dutch Harbor for further repairs. In providing assistance on the incident, NOAA was able to provide weather forecasts and outlooks and to maintain communication between the resource agencies and the Coast Guard. Yunaska Island is part of the Aluetian subunit of the Alaska Maritime National Wildlife Refuge and as such is under the jurisdiction of the U.S. Fish and Wildlife Service. Although they were made fully aware of the incident, no specific concerns were expressed during the duration of the incident.

Behavior of Oil:

A 1000 gallons of diesel were released and dispersed in the high winds leaving no observable evidence.

Countermeasures and Mitigation:

No countermeasures were employed

Other Special Interest Issues:

None

NOAA Activities:

NOAA was notified of the incident on Oct. 25, 1996. Weather forecast support was provided to the Coast Guard. Since Tanaga Island is part of Aleutian Islands Subunit of the Alaska Maritime National Wildlife Refuge resource trustees with both the USFWS and NMFS were notified. Being wintertime no birds were present, and the only concern was a stellar sea lion haul out on the north side of Tanaga Island, some 5-7 miles away from the actual grounding. The sea lions are a threatened speicies in Alaska. Response was totally by phone and fax, and lasted for roughly one month with periodic updates and status reports to the NMFS.

References:

1. NWS, Anchorage
2. Brad Smith, NMFS, Anchorage
3. Ron Britton, USFWS, Anchorage

Potential Spill Report Format

Name of Spill: M/V Baneasa

NOAA SSC: John W. Whitney

Date of Incident (mmddyy): 122596

Location of Incident: 60 to 70 nautical miles south of Atka and Amilia Islands, Aluetian Island chain

Latitude: 51,00,N

Longitude: 174,00,W

Oil Product: Bunker fuel and Diesel

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)
Type 4 - Heavy Oils (heavy crude oils, No. 6 fuel oil, bunker c)

Barrels: 4200 bbls of bunker fuel
800 bbls of diesel

Source of Spill: Non-Tank Vessel

General Description:

Very early on Christmas morning M/V Baneasa, an 833' unladen freighter reported that it's rudder was stuck hard to starboard and that it was drifting at the mercy of the winds and seas. Being roughly 70 miles south of Amilia Island out in the Aleutian Chain with SE winds, the Coast Guard determined that it would probably go aground sometime on the morning of Dec. 26. This was the grinch that stole Christmas for a lot of us. The Coast Guard mobilized 18 folks from the Pacific Strike Team, NOAA was called, SUPSLAV was activated, and the state and all the resource agencies were put on high alert. The first vessel on scene was the CGC Midget which put a line to the Baneasa, providing a small measure of control. The RP arranged for a small tug to arrive on-scene by midnight of Dec. 26 with a much larger one, the Agness Foss, due to arrive a day after that. Meanwhilea command post had been established at the new ADES Emergency Operations Center on Ft. Richardson in Anchorage, a forward command post was established at Atka Island, a CG c-130 overflight occurred, NAVSUPSALV spill equipment was mobilized to Elmendorf AFB for possible transfer to the scene, and PST personnel were enroute to Adak with pumps and dewatering gear. . Detailed weather forecasts, specially done for this area and incident indicated that winds were going to be much more favorable than originally forecast, and that, therefore , there was little danger of the vessel running aground for several more days, if at all. As planned the tugs reached the Baneasa, and took it under tow, reaching Adak Navy base on Dec. 29.

During this incident NOAA arranged for and promulgated detailed NWS forecasts for this area, that ordinarily aren't done, and established an Environmental Section in the ICS, identifying general resources at risk and arranging for specific contacts in NMFS, USFWS and ADFG if a grounding appeared imminent. In addition, a heroic attempt was made to provide a backup SSC for the departing Anchorage SSC. NOAA was told to stand down on the early morning of Dec. 27, after the Baneasa was under tow.

Behavior of Oil:

A 1000 gallons of diesel were released and dispersed in the high winds leaving no observable evidence.

Countermeasures and Mitigation:

No countermeasures were employed

Other Special Interest Issues:

None

NOAA Activities:

NOAA was notified of the incident on Oct. 25, 1996. Weather forecast support was provided to the Coast Guard. Since Tanaga Island is part of Aleutian Islands Subunit of the Alaska Maritime National Wildlife Refuge resource trustees with both the USFWS and NMFS were notified. Being wintertime no birds were present, and the only concern was a stellar sea lion haul out on the north side of Tanaga Island, some 5-7 miles away from the actual grounding. The sea lions are a threatened speicies in Alaska. Response was totally by phone and fax, and lasted for roughly one month with periodic updates and status reports to the NMFS.

References:

1. NWS, Anchorage
2. Brad Smith, NMFS, Anchorage
3. Ron Britton, USFWS, Anchorage

Potential Spill Report

Name of Spill: M/V Hekabe

NOAA SSC: John W. Whitney

Date of Incident (mmddyy): 022298

Location of Incident: 90 miles SW of Adak Island

Latitude: 50,03,N

Longitude: ~~179,01,E~~ 17

Oil and Chemical Products:

430,000 gallons of heavy fuel oil
100,000 gallons marine diesel
90 tons of lube oil
80 tons ammonia vapor
130 tons ammonia liquid

Oil Type:

Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)
Type 4 - Heavy Oils (heavy crude oils, No. 6 fuel oil, bunker c)

Barrels: total of abut 13,000 Bbls of petroleum

Source of Potential Spill: Tank Vessel

General Description:

A Kenai-bound tanker with an injured crew member on board and no power was drifting in storm-whipped seas south of the Aleutian islands on Sunday, Feb. 22. Winds gusting at 92 mph and 40-foot seas kept rescuers from reaching the Hekabe, a Bahamian-based tanker carrying ammonia. The tanker was headed to Unocal Corp's fertilizer plant in Nikiski to pick up more ammonia, and was scheduled to return to South Korea after making the Kenai pick-up. The ship lost power when rough seas caused a spare engine cylinder head to slam into the ship's cooling system in the engine room early Sunday morning, and breaking the leg of the ships engineer. Rescuers in a Coast Guard helicopter headed out from Kodiak, but the chopper could make it only as far as Dutch harbor before gale-strength winds forced it to stop there for the night. Soon after the initial mayday call, a Coast Guard cuter patrolling near the Pribilof Islands headed out toward the tanker 1000 miles away. Rescuers flew over the disabled tanker in a C-130 plane Sunday afternoon and reported very high winds and seas. By Monday evening, Feb. 23, crews on board were able to repair temporarily the damaged equipment, and the vessel regained its own power sufficient enough to come into port at Adak before continuing on its journey.

Most of the NOAA response amounted to contacting the local NWS and coordinating weather updates with the Coast Guard. The situation was also reported to NOAA Hazmat MASS group in Seattle and to DOI in Anchorage.

Potential Oil Spill Report

Name of Spill: M/V Hekifu

NOAA SSC: John W. Whitney

Date of Incident (mmddyy): 021999

Location of Incident: Dutch Harbor, Alaska

Latitude: 53,50,N

Longitude: 166,30,W

Oil Product: Bunker C and diesel and lube oil
Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)
Type 4 - Heavy Oils (heavy crude oils, No. 6 fuel oil, bunker c)

Barrels: 490 bbls of diesel
2800 bbls of bunker C
126 bbls of lube oil

Source of Spill: Non-Tank Vessel

General Description:
On February 19th, the Liberian flagged freight ship M/V Hekifu ran aground at Rocky Point in Dutch Harbor, Alaska, during an unexpectedly intense storm event with 100 mph winds, icing conditions, snow, and zero visibility which knocked out local communications. It appeared that we had another Kuroshima on our hands, and the Coast and the state prepared to fly oil-spill response gear and personnel to the harbor from Anchorage as soon as weather permitted. Action by the Coast Guard and local tugs was eventually successful in pulling her off the rocks without losing any oil. Fortunately the CGC Mellon was able to get outside of Unalaska Bay and serve as a communications platform after the local lose of all communications. NOAA was asked to provide weather information and passed on that gale force winds were predicted to last through the weekend with some possible calming on Monday, Feb. 22.

Potential Spill Report Format

Name of Spill: F/V American Star

NOAA SSC: John W. Whitney

Date of Incident (mmddyy): 021100

Location of Incident: SE side of Unimak Island

Latitude: 57,37.8,N

Longitude: 163,32.9,W

Oil Product: Diesel
Lube and Hydraulic Oil

Oil Type:
Type 2 - Light Oils (diesel, No. 2 fuel oil, light crudes)
Type 3 - Medium Oils (most crude oils)

Gallons: 26,564 gals diesel
720 gals lube
887 gals hydraulic oil

Source of Potential Spill: Non-Tank Vessel

General Description:

On the morning of Feb. 11, 2000, a fire broke out on the F/V American Star, a 140' crabber/tender, just south of Unimak Island. A mayday rousted a helo from the deck of the CGC Mellon, and the crew of 5 was successfully removed from the burning vessel. At this point, though, the unmanned vessel was only a few miles offshore and the wind was 30 knot from the SE blowing it towards a grounding on the SE side of Unimak Island. With rocky shores to roughly one mile to either side, the vessel grounded in the afternoon on a sand and gravel beach. The steel hull remained intact, though, and no pollution was observed. Then began a month long dance with the weather as the salvor, Dan Magone from Dutch Harbor, tried several times to reach the vessel only to be thwarted by the weather and high seas. Finally large bladders were flown in by the Coast Guard, and the salvor successfully pumped the fuel and removed the drums from the vessel, with no pollution to the environment. NOAA provided support to the CG by keeping track of the weather and weather forecasts, and by coordinating information from the resource agencies on sensitivities in the vicinity. Grounding occurred only one mile from the mouth of the Lazaref River, a salmon spawning stream where there may be chum and/or pink salmon eggs in the intertidal gravels. Other information from the USFWS indicated that loose concentrations of waterfowl including Steller's eiders (threatened species), scoters, emperor geese, and cormorants had been observed in the vicinity only three days previous.