
APPENDIX A. CHRONOLOGY

(Derived from U.S. Coast Guard Pollution Reports. All times are local
Hours of daylight are roughly from 0600 to 2200.)

MARCH 24,1989 (FIRST DAY)

- 0028 Marine Safety Office (MSO) Valdez receives notification from *Exxon Valdez* reporting that the vessel was hard aground on Bligh Reef. The vessel was loaded with 1,264,155 barrels (53,094,510 gallons) of North Slope crude oil. While maneuvering to avoid glacial ice, the vessel left the tanker lanes and struck bottom on a 30-foot charted shoal on Bligh Reef. The vessel's draft fore and aft was 56 feet. Approximately 510,000 gallons of crude oil released. Initial assessment of pollution extent and shoreline impact could not be made with any degree of accuracy due to darkness.
- 0030 Captain of the Port (COTP) at MSO Valdez closes Port of Valdez to all traffic. The tug *Stalwart* is dispatched from Alyeska Marine Terminal to assist *Exxon Valdez*.
- 0100 Pilot boat is made available to transport Coast Guard (CG) and Alaska Department of Environmental Conservation (ADEC) pollution personnel to the scene.
- 0105 Alaska RRT Chairman for this incident is notified.
- 0148 MSO Valdez contacts Air Station Kodiak requesting helicopter overflight at first light.
- 0206 Attempt to refloat *Exxon Valdez* at high tide unsuccessful.
- 0227 Motor vessel (M/V) *Shelikoff* reports oil slick to half mile south of *Exxon Valdez*.
- 0249 Pacific Area (PACAREA) Strike Team assistance requested.
- 0323 CG personnel now aboard *Exxon Valdez*. Tanks gauged: about 138,000 barrels (5.8 million gallons) lost from wing tanks 1, 3, 5 starboard, starboard slop tanks, and number 5 center tanks.
- 0330 Initial response efforts at the Port of Valdez under Alyeska's control are hampered by equipment casualties and holiday personnel shortages. As response personnel arrive at the Alyeska Terminal, however, Alyeska is unable to comply with the response. timeliness provision in its own contingency plan that calls for initial response at the vessel within five hours of first notification.
- Alyeska's only containment barge is tied up at Valdez Terminal, stripped for repairs. Barge was not certified by the CG to receive oil, but it could carry recovery bladders. Alaska's state contingency plan requires Alyeska to notify the state when response equipment is taken out of service. Satisfied the barge was seaworthy without repairs, Alyeska had not done so.
- Before barge could be used, pollution gear had to be loaded. Crane riggers called at 0330. By this time, CG estimates 5.8 million gallons already discharged from the tanks.

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- 0400 Stability of *Exxon Valdez* is CG's highest priority. The biggest concern is that the vessel might capsize and break up, spilling the entire 53 million gallons of oil. Word is passed to Alyeska to assemble oil transfer (lightering) equipment (six-inch hoses and fenders to transfer oil from *Exxon Valdez* to recovery vessels, bladders or other containers).
- 0414 Tank vessel (T/V) *Exxon Baton Rouge* contacted and is enroute to initiate oil transfer operations.
- 0500 CG small boat dispatched to survey the area.
- 0727 Alyeska Marine Terminal security helicopter aloft for overflight with CG investigator aboard. Analysis of videotape taken by the investigator showed the slick to be 1,000 feet wide by four miles long. Sheen extends in a southerly direction with minimal contact with shoreline.
- 1115 The Federal Aviation Administration (FAA) imposes temporary flight restriction around *Exxon Valdez*. Rate of discharge from *Exxon Valdez* is slowing. *Exxon Baton Rouge* arrives at location of grounding and begins to rig fenders for coming alongside to begin oil transfer operation
- 1140 H-3 helicopter overflight observes extremely heavy oil 20 to 30 feet from the side of the vessel. Calm sea is slowing the movement of the oil.
- 1145 COTP imposes 500-yard safety zone around grounded vessel. Notice to Mariners broadcast begins.
- 1200 Regional Response Team (RRT) teleconference commences. Discussion includes use of dispersants and in-situ burning.
- 1230 Alyeska barge arrives at Bligh Reef, seven hours after the five-hour initial response time required by Alyeska's contingency plan. Oil slick is already 1,000 feet wide and four to five miles long. The barge arrives with two skimmers in tow, two 1,000-gallon bladders, and 8,000 feet of containment boom for a spill of 10 million gallons. The two on-scene skimmers begin recovering oil near the *Exxon Valdez*.
- 1310 MSO Valdez estimates quantity released is now 250,000 barrels (10.5 million gallons).
- 15 10 On-Scene Coordinator (OSC) grants permission for dispersant test on leading edge of sheen.
- 1645 CG 32323 underway with State of Alaska Governor Cowper and assistants on-board.
- 1700 CG 32323 drops off Governor Cowper and assistants. They board *Exxon Valdez*.
- 1800 Dispersant trial application is conducted with less than satisfactory results, due to lack of mixing energy. Use of dispersants is deemed inappropriate at this time.
- 1820 PACAREA Strike Team members arrive in Cordova, Alaska.
- 2010 *Exxon Baton Rouge* alongside *Exxon Valdez*, port-to-port.
- 2030 Contract divers arrive on scene.
- 2154 *Exxon Baton Rouge* made fast alongside *Exxon Valdez*.

2215 First oil transfer hose connected.

2338 Second oil transfer hose connected between the two vessels.

MARCH 25,1989 (SECOND DAY)

0015 Tug *Jeffrey Foss* on scene with 30,000-barrel tank barge to receive recovered oil.

0736 Oil transfer operations begin, with cargo transferred to *Exxon Baton Rouge*.

0745 OSC reports that loss of additional oil has ceased.

0750 Commercial divers complete underwater hull survey showing holes in 11 tanks. *Exxon Valdez* had been grounded from the number two tank aft to the number four tank. The vessel's designer advises CG that ship is not floatable and that a major salvage operation will be required. Meanwhile, oil transfer to the *Exxon Baton Rouge* continues at a rate of 10,000 to 12,000 gallons per hour. Water replaces cargo to maintain ballast.

0830 Alyeska pipeline representative advises that pipeline flow has been slowed to 768,000 barrels per day. At this rate, Alyeska has seven days of storage capacity.

0833 USCGC *Rush* is ordered to put CG personnel aboard T/V *Oriental Crane* and to proceed with all haste to *Exxon Valdez* site and establish a command and control platform. USCGC *Sedge* is ordered to Prince William Sound to assist OSC.

0845 Oil transfer operations suspended as on-scene crews reevaluate the situation.

0930 Ms. Alice Berkner of International Bird Rescue and Research Center arrives in Valdez to set up facilities for treating oiled animals.

0945 On-Scene RRT agency representatives hold a meeting at MSO Valdez with teleconference following at 1110. Dispersant trial application planned utilizing C-130 cargo aircraft. Exxon Shipping Company assumes management of spill and financial responsibility.

1100 *Exxon Valdez* surrounded by containment boom. USCGC *Rush* on scene to assume air traffic control functions.

1145 CG Commander of the Pacific Area (PACAREA) requests AIREYE surveillance from the Atlantic Area Commander.

1200 Second hull survey conducted with video cameras by dive team.

1230 Some oil released as transfer operations begin again. Oil transfer had been delayed due to piping damage.

1330 FAA in Anchorage is mobilizing air traffic control team to set up temporary control tower (seven personnel) at Valdez Airport.

1900 RADM Nelson, Commander Seventeenth CG District, arrives on scene.

1930 Clean-up crews report 1,200 barrels of oil recovered.

2000 Dispersant trial application conducted by C-130 with inconclusive results. Another test to be conducted on March 26 under optimal light conditions

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- 2010 *Exxon Valdez* had transferred 11,000 barrels of oil to *Exxon Baton Rouge* before suspending oil transfer operations. Second test of ships cargo transfer system will be conducted on the morning of March 26.
- 2015 Exxon completes initial mapping of the area to determine the extent of the oil spread and impact. Bird rescue operation instituted by Exxon.
- 2045 Burn test conducted near Goose Island with approximately 100 square feet of tar left as a residue. An estimated 15,000 gallons of oil were consumed.

MARCH 26,1989 (THIRD DAY)

- 0530 CG Strike Team members join responders on *Exxon Valdez*. Earlier they had staged an Open Water Oil Containment and Recovery System (OWO CRS) for loading onboard USCGC *Sedge*.
- 0900 Exxon has assigned over 100 people including Exxon, Alyeska, and contract personnel to clean-up operation. Another 200 people are on standby.
- 0643 CG reports shipment of one MARCO skimmer from Elmendorf Air Force Base, Alaska. Twenty people transported to Bligh Island to survey beach cleanup and bird and wildlife impact. 75 oiled birds reported sighted by Department of the Interior (DOI) personnel. Birds include White Wing Scoters, Old Squaw, and Golden Eye ducks. Most oiled birds sighted on west side of Bligh Island. Two oiled sea otters sighted. DOI estimates that 3,000 seabirds and several hundred sea otters live in area of Knowles Head to Galena Bay.
- 1045 Three CG personnel arrive from MSO Anchorage to assist.
- 1115 CG personnel and members from ADEC and Exxon confer on state efforts for protecting sensitive areas on north side of Bligh Island.
- 1123-1510 USCGC *Sedge* arrives on scene north of Bligh Reef. USCGC *Sedge* dispatches small boat to recheck proper positioning of navigational equipment within the sound, maintaining navigation safety levels.
- 1400 Skimmers have recovered 2,275 barrels of oil from the water.
- 1500 National Transportation Safety Board (NTSB) representatives board *Exxon Valdez*.
- 1600 Dispersant application conducted with C-130, equipped with Beigart Air Deliverable Dispersant System (ADDS) system. Results are satisfactory.
- 1700 46,256 barrels of oil transferred to *Exxon Baton Rouge*.
- 1800 Skimmers recover 3,004 barrels of oil.
- 1830 Governor Cowper declares a state of emergency.
- 1900 51,064 barrels transferred to *Exxon Baron Rouge*. Commercial divers conduct survey with the use of video equipment.
- 2000 Additional survey by divers reveals port tanks intact. Some distortion is evident.

MARCH 27,1989 (FOURTH DAY)

High winds seriously impair response operations. Overnight, gusts clocked as high as 73 miles per hour have driven the spill nearly 40 miles into Prince William Sound, coating beaches at Little Smith, Naked, and Knight Islands. Skimmer systems, booms, and other equipment had to be moved to sheltered water for protection.

0542 USCGC *Rush* launches HH-65 helicopter to provide OSC and key response personnel an overflight view of the spill. USCGC *Rush* continues to enforce air space restrictions.

1100 90,599 barrels of oil have been transferred to *Exxon Baron Rouge*.

1245 CG overflight reveals that oil pooled up southwest of *Exxon Valdez* has formed dark, emulsified ribbons. Entire north and northeast side of Smith Island is heavily affected by thick oil. Some oil reaching Seal Island. Oil glancing eastern end of Naked Island is a lighter sheen, containing smaller ribbons. No recovery of oil since 1800, March 26.

1330 RRT assembles for a teleconference. The staging of sorbent materials at sensitive beaches is planned for areas in the path of the oil spill trajectory. Exxon is informed of the need for beach clean-up crews.

1900 124,299 barrels of oil have been transferred from *Exxon Valdez* to *Exxon Baton Rouge*.

CG overflight reports heavy shoreline contamination on northeastern end of Knight Island. Large pools of oil appear in the bays and inlets of the island. Oil heavily affects Eleanor Island moving west around north end of island. High winds move spill beyond sites initially selected for recovery operations

At the RRT teleconference, permission is given for dispersant application. Scheduled dispersant application did not take place, because, aircraft did not arrive at authorized site. Virtually all mechanical recovery operations have ceased.

2100 3,000 barrels of oil recovered.

MARCH 28, 1989 (FIFTH DAY)

1000 Additional PACAREA Strike Team equipment arrives in Valdez.

1010 Exxon requests use of dispersants and in-situ burning around Eleanor Island (Zone 3). RRT considers dispersant use in this area inappropriate.

1030 USCGC *Sedge* informs OSC that no oil is in Main or Eshamay Bay. Work crews are setting booms in both areas.

1120 ADEC approves in-situ burning permit for area around Eleanor Island. PACAREA Strike Team reports 226,874 barrels transferred from *Exxon Valdez* to *Exxon Baton Rouge*.

1200 CG overflight from 0800 to 1130 indicates oil has reached beaches on all islands from northeastern side of Storey Island, Naked Island, Eleanor Island, Ingot Island, and Knight Island down to the Bay of Isles area on Knight Island. Heavy oil slicks are found between Naked and Eleanor Islands, extending in a westerly direction out into Knight Island passage.

Heavy oil impact on Smith and Little Smith Islands, with moderate contamination on the eastern side of Green Island. A major clean-up mobilization is initiated to protect critical fishery resources in Eshamay Bay, Main Bay, Port San Juan, and Esther Bay. Response management is reorganized formally as a steering committee consisting of CG, ADEC, and Exxon.

Major operation mobilized to protect fishery resources in Eshamay Bay, Main Bay, Port San Juan, and Esther Bay.

- 1230 Exxon-chartered C-130 applies dispersants in areas of heavily concentrated oil. Minor discharge of oil from *Exxon Valdez*. OSC authorizes use of dispersants.
- 1300-1530 Exxon dispersant operation conducted near vicinity of *Exxon Valdez*. Exxon reports excellent results. Dispersant operation also conducted off eastern end of South Island.
- 1400 OSC opens Port of Valdez to vessel traffic. Vessels subject to Vessel Traffic Service (VTS) regulations will make daylight transits only. A 1,000-yard safety zone around the *Exxon Valdez* is imposed. Tank vessels inbound or outbound will be required to have a two-tug escort to or from Bligh Reef. Vessels directed to avoid any clean-up operations by 500 yards.
- 1600 OSC holds teleconference with Alaska State Legislature.
- 1730 Secretary of Transportation Skinner, Environmental Protection Agency (EPA) Administrator Reilly, and CG Commandant Admiral Yost arrive to assess clean-up and oil transfer operations.
- 1800 274,000 barrels of oil transferred from the vessel at a transfer rate of 3,624 barrels per hour. Soundings indicate vessel is still hard aground between the number two and three starboard tank areas.

MARCH 29, 1989 (SIXTH DAY)

- 0845 Secretary of Transportation Skinner, EPA Administrator Reilly, CG Commandant Yost, Senator Murkowski, and Congressional staffers view spill area from CG overflight. They arrive in Valdez after having reviewed clean-up and oil transfer operations. They meet with OSC.
- 1200 At Valdez site, two dispersant aircraft stand ready for operations. An Aerostar aircraft augments command and control. Five landing craft (LCM) arrive for beach cleanup. Seven skimmers operate around Knight Island. Over 8,000 feet of additional boom is enroute. Skimmers remove over 5,000 barrels of oil.
Over 390,000 barrels of oil transferred off *Exxon Valdez*. Present pumping rate is 9,000 barrels per hour.
- 2000 Total of 442,988 barrels of oil-45 percent of cargo-now removed from *Exxon Valdez*. National Oceanic and Atmospheric Administration (NOAA) review of recent overflights indicates oil beginning counterclockwise rotation, moving from Naked Island, down western side of Knight Island, and up eastern side of Knight Island and western side of Green Island.
- 2130 *Exxon Baton Rouge* ceases taking on *Exxon Valdez* cargo. *Exxon San Francisco* is enroute to resume operations.

MARCH 30, 1989 (SEVENTH DAY)

Three separate beach clean-up work groups established. Priority Assessment Team to rank most critically affected areas for cleanup. Clean-up Assessment Team will determine use of best clean-up techniques. Shoreline Assessment Team will make final assessments of clean-up work.

Exxon reports that 7,537 barrels of oil recovered. NOAA estimates that 30 to 40 percent of the spilled oil has evaporated.

The oil has passed Montague Island and Latouche Island and is proceeding westerly into Gulf of Alaska.

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- 0800 Oil concentrations have moved south seven to eight miles overnight, extending to the Montague Strait area near southern tip of Montague Island and eastern side of Latouche Island. Oil remains concentrated in center of Montague Strait. Green Island surrounded by oil. Heavy concentrations of oil remain in the area southeast of Naked Island, through the Eleanor and Ingot Island areas, and down western side of Knight Island. Vessel *Crystal Star* (130 feet) set up as Exxon floating command center.
- 0900 OSC authorizes three EPA members to assist Exxon in planning for beach cleanup.
- 0915 CG transportable communications center arrives from Sacramento, CA, to handle Coast Guard air traffic communications.
- 1000 Oil transfer from *Exxon Valdez* totals over 447,000 barrels.
- 1100 *Exxon San Francisco* takes over transfer operations from *Exxon Baton Rouge*. Divers in the water conduct additional surveys.
- 1300 VADM Robbins, Commander CG Pacarea, and Senator Lautenberg arrive in Valdez.
- 2300 *Exxon Baton Rouge* departs. Estimated 668,000 barrels of oil left on *Exxon Valdez* at conclusion of transfer operations.

MARCH 31, 1989 (EIGHTH DAY)

Due to low visibility, CG using its own AIREYE and Exxon infrared tracking equipment to monitor spill migration. NOAA projections using AIREYE surveillance shows large crossover effect. Oil slick appears to be turning back on itself, moving into Knight Island Passage. Oil emulsifying with water increases volume of liquid to be recovered. Responders replace weir-type skimmers with rope-mop units.

Green Island surrounded by thickening oil. Large patch of thick oil reaches northwestern side of Knight Island past Herring Bay area. Latouche Island touched by lighter patches. No signs yet of beach contamination. Exxon reports 7,537 barrels of oil recovered. Preliminary DOI survey of Green Island indicates 1,000 oiled birds.

- 1000 Senator Stevens arrives and is briefed by the OSC.
- 1143 USCGC *Sedge* in Sawmill Bay operating OWOCRS. Personnel are issued respiratory equipment to avoid irritating fumes from oil. Three dead sea otters removed from the sea.
- 1200 Nearly 80,000 feet of sorbent boom transferred from USCGC *Rush* to contract vessels in southern part of Prince William Sound. The *Rush* acts as command and control platform in this area. Operating OWOCRS from USCGC *Sedge*, Strike Force recovers 679 barrels of oil. . Meanwhile, *Exxon Valdez* shows signs of buoyancy after 500,000 barrels off-loaded to *Exxon Baron Rouge* and *Exxon San Francisco*.
- 1400 Alaska Air National Guard air drops sorbent materials to contractor boat crews in Hawkins Island area.
- 1700 Ten sea otters received by the wildlife cleaning facility.
- 1800 220,952 barrels of oil transferred from *Exxon Valdez* to *Exxon San Francisco*.
- 1930 USCGC *Sedge* departs for Sawmill Bay area by way of Knight Island passage.

APRIL 1, 1989 (NINTH DAY)

Heavy weathered oil continues to wrap around Knight Island. Emulsified oil reported from Squire Point south to Prince of Wales Passage opposite Port San Juan. Heavy oil also reported on west side of Latouche Island.

By April 1, a substantial accumulation of response equipment has been deployed throughout affected areas of the sound. For example, the amount of boom positioned by Exxon from March 24 to April 1 has grown from 12,500 feet to over 84,000 feet.

Galena Bay is protected by 1,000 feet of deflection boom; Head Main Bay by 5,000 feet, with a recovery vessel attending; Hatchery Island of Main Bay by 2,000 feet; and Herring Bay, Knight Island by 3,000 feet of sorbent boom and 6,000 feet of recovery boom used by five vessels for later pickup by skimmers.

Sawmill Bay, Evans Island protected by 50,000 feet of boom deployed with 15 vessels and much other equipment; Point Helens, Knight Island shielded by 1,200 feet of recovery boom; Snug Harbor, Knight Island by 1,000 feet; Bay of Isles, Knight Island by 500 feet of boom; and Bushby Island by 5,000 feet of recovery boom. Applegate Rock protected by CG skimming barriers with an attending 35,000-barrel recovery barge. Crippled *Exxon Valdez* is surrounded by 6,000 feet of boom.

The federal presence also has increased significantly. Employed in the response on April 1 are 391 CG personnel, 23 from DOI, 14 from NOAA, six from EPA, and four from the Department of Agriculture. On-scene equipment marshalled by federal agencies includes 8,000 feet of sea boom, 2,000 feet of flexi-boom, 1,200 feet of harbor boom, over 100,000 feet of sorbent boom, two CG Strike Force skimming OWOCRS, two Navy MARCO Class V skimmers, a PACAREA tow vehicle, eight boats, three CG cutters, four fixed wing aircraft, and four helicopters.

0650 295,645 barrels of oil transferred to *Exxon San Francisco*.

1000 State officials mobilizing resources to conduct water sampling in areas of hatchery and spawning activities.

1130 Wildlife recovery centers treating 28 oiled birds and 12 otters.

1215 Notice to mariners broadcast: all vessels not involved in response operations are to stay well clear of any observed oil.

1300 Secretary of Transportation Skinner and CG Commandant Admiral Yost briefed by OSC on cleanup status and adequacy.

APRIL 2, 1989 (TENTH DAY)

Using CG AIREYE, NOAA reports the leading edge of spill is approximately nine miles south of Cape Resurrection, progressing southwestward.

Beach cleanup at Naked, Peak, and Smith Islands begin as response teams gather growing clean-up manpower and pool special skills. Exxon team totals 160 persons now, including experts from the U.S., Canada, and the United Kingdom. The company has hired over 350 additional clean-up workers. Nearly 100 vessels are actively participating in the response.

336,853 barrels of oil have been transferred from the *Exxon Valdez* to *Exxon San Francisco*.

Exxon reports total quantity of oil recovered exceeds 10,000 barrels.

Exxon visual overflight indicates lighter sheens of oil are flowing into Gulf of Alaska. Large concentrations of oil remain in Knight Island Passage and in bays and sounds on north end of Knight Island.

ADEC beach surveys on Eleanor Island, Ingot Island, and northern end of Knight Island show heavy contamination.

0900 At wildlife cleaning centers, 28 oiled otters and 49 oiled birds are being treated. Approximately 140 oiled birds per square mile are found in Gibbons/Anchorage area. DOI estimates very high wildlife mortality rates.

1300 *Exxon San Francisco* loaded to its capacity of 452,533 barrels.

OSC grants Exxon request to apply dispersant to the slick sighted south of Point Erlington, but results not satisfactory on the main body of the oil. Dispersants moderately effective in breaking up surrounding oil sheen.

1400 Exxon reports 943,000 barrels of oil transferred from *Exxon Valdez* to *Exxon Baton Rouge* and *Exxon San Francisco*.

1530 *Exxon Baytown* alongside *Exxon Valdez* for continuation of oil transfer.

1600 150 birds treated and 30 sea otters recovered. Once treated, otters are transported to various aquariums.

By evening, southern extent of the spill progresses further south and is now 12 miles southwest of southern tip of Montague Island. Small stringers of oil sighted in the Bainbridge and Prince of Wales Passages. Light sheen remains in all passages. Three main streams of oil are flowing into Gulf of Alaska and are currently four to five miles offshore.

NOAA weather stations set up at northwest corner of Sawmill Bay and southern tip of Latouche Island.

APRIL 3, 1989 (ELEVENTH DAY)

Alaska Department of Fish and Game cancels all herring fishing in Prince William Sound based on damage to spawning areas.

1400 New remote weather stations established at northeast point of Sawmill Bay, Dangerous Island, and Perry Island.

1941 USCGC *Sedge* reports 8,949 barrels of oil recovered by CG OWOCRS.

2000 Skimming operations progress with oil recovery rates approaching 90 percent.

2100 Appearance of oil not yet sighted on shorelines west of Cape Puget, which serves as boundary between Valdez and Anchorage OSCs. Anchorage OSC sends representative to Prince William Sound. Preparations start to protect against possible movement of oil into Gulf of Alaska.

APRIL 4, 1989 (TWELFTH DAY)

Shoreline crews continue to operate at Smith and Naked Island. Housing for work crews provided by the barge *Exxon II*, located in Mummy Bay, Knight Island and by the M/V *Bartlett* (to be relieved later by M/V *Aurora*) in Sawmill Bay.

Exxon has established a boat cleaning station in Valdez. Cordova Fisheries Union are setting up another cleaning station in Cordova.

USCGC *Rush* works 329 aircraft and processed 1,867 radio contacts between 0700 and 2130.

Health and safety training classes set up by Exxon contractors to provide mandatory training for all clean-up personnel.

Oil transfer from *Exxon Valdez* completed by *Exxon Baytown*; *Exxon Baytown* underway.

APRIL 5, 1989 (THIRTEENTH DAY)

Over 66,000 feet of boom deployed in Sawmill Bay. This represents 65 percent of total boom deployed. OSC had decided to deploy a significant amount of booming and skimmers in defensive positions to protect hatcheries, removing capacity to fight the spill itself.

Air Force Military Airlift Command (MAC) airlifts U.S. Navy, CG, and Exxon skimmer boats, drums of dispersant, mooring systems, boom vans, barrier material, and assorted vehicles from California, Oregon, Texas, Virginia, Denmark, and Finland to spill site. Exxon will pay airlift cost.

Sawmill Bay fishermen now expressing confidence that hatcheries will be protected. Clean-up crews at a number of beach locations begin to mop up oil in tidal pools.

Primary concentration of oil in Prince William Sound extends almost in a continuous sheen from Smith Island, between Knight and Green Islands, and down Montague Strait out into Gulf of Alaska. Oil remains in passages between Bainbridge and Latouche Passages. Large slick has moved into Gulf of Alaska, extending from southern outlets of the passages across Montague Strait. Slick has moved approximately 50 miles into the gulf.

Skimming rates continually reduced due to oil weathering.

OSC permits transit of two vessels during daylight hours, provided they are heading in the same direction. Each vessel must have two-tug escort.

USCGC *Rush* works 127 air contacts and processes 550 radio contacts as part of air traffic control operations.

- 1035 *Exxon Valdez* refloated after oil transfer operations and is holding position on Bligh Reef. About 16,445 barrels of oil remain in the vessel. 1,000-yard safety zone established around the tanker. Two MARCO skimmers and a vacuum truck are aboard *Exxon Valdez* and attended by workboats and standby dispersant-loaded aircraft to respond to any additional spill. Transit of *Exxon Valdez* to Naked Island area begins.
- 1420 USCGC *Sedge* reports recovery of oil is becoming extremely difficult due to formation of a water-and-oil emulsion or 'mousse.'
- 1935 *Exxon Valdez* anchored in Outside Bay near Naked Island.
- 2201 Canadian and U.S. Region Joint Contingency Plan activated. Co-chairs are Captain G.E. Haines, the Commander of the Coast Guard District 17 Marine Safety Program, and Mr. G.R. Stewart, Director General, Western Region, Canadian Coast Guard.

APRIL 6, 1989 (FOURTEENTH DAY)

Twenty-one additional skimmers, including 15 Navy units transported by the Department of Defense (DOD), enroute to spill scene.

Variety of response equipment being assembled at Mummy Bay and Point Helens, Knight Island to protect environmentally sensitive areas there. Also, joint U.S. - Canadian response plan invoked to speed delivery of more clean-up equipment and operators.

USCGCs *Midgett*, *Yocoa*, *Sweetbriar*, *Iris*, and *Planetree* directed to join cutters *Rush*, *Ironwood*, and *Sedge* in clean-up area.

Mandatory health and safety classes for all clean-up crews begin while contractors work with NOAA to develop detailed maps of oiled beach areas.

Exxon Valdez remains anchored off Naked Island.

NOAA overflight reveals oil is thinning and heading out to sea. Heavy oil contamination reported at Smith Island, Main Bay, Falls Bay, Eshamay Bay, eastern side of Chenega Island, and northern parts of Bainbridge, Evans, and Latouche Islands. Eastern and western shores of Knight Island also contaminated. Oil with light concentrations of emulsified ribbons spotted north of Main Bay near Port Nellie Juan.

Mortality rate of otters turned into rehabilitation centers is approximately 50 percent. Leading edge of oil slick 22 miles south of Nuka Bay in Gulf of Alaska. Impact observed on the Chiswell Islands. Oil mousse surrounds Barwell Island, and some oil has been trapped on eastern side of Cape Resurrection.

Oil observed approximately 20 miles off coast from Gore Point, varying in width from 10 to 20 miles. Oil forming wind rows. Oil in Prince William Sound continues to flush into the gulf.

Rear Admiral Nelson (USCG) assumes OSC responsibility to facilitate strategic control of response.

Oil volume in Bainbridge and Latouche Passages diminishes with migration of spill into the gulf.

USCGC *Rush* maintaining air traffic control.

Oil affects areas within Anchorage OSC jurisdiction. Oil slick reaches Barwell Island at entrance of Resurrection Bay.

- 1500 Overflights indicate difficulties encountered in positioning skimmers in areas of heavily concentrated oil. Emulsified patches of oil clinging to some shoreline areas inaccessible to larger skimmers.

APRIL 7, 1989 (FIFTEENTH DAY)

At direction of President Bush, DOD establishes Director of Military Support Joint Task Force (DOMS JTF) to assist OSC in cleanup. DOD assessment team will determine best way to apply military support. Joint Task Force begins daily oversight meetings in Pentagon Army Operations Center.

Emergency order tightening operations at Valdez Terminal signed by Governor Cowper.

Spill area enlarged to approximately 2,600 square nautical miles, according to NOAA analysis of recent overflights. Heavy concentrations of oil sighted on eastern side of Knight Island. Sheen remaining in most passage areas forms streams and stringers.

Approximately 300 dead birds and 76 sea otters collected. The new Valdez rehabilitation center begins operations.

- 0930 Divers survey tank number 1C beneath *Exxon Valdez* and begin drilling operations to prevent further spread of main crack.
- 1830 Sheen with streaks of mousse reported extending from the northern part of Naked Island down eastern shore of Knight Island, through Latouche Passage, and into Gulf of Alaska. Northern part of Montague Island and Green Island affected. Extensive sheen observed in and around Snug Harbor. Light sheen with stringers ranges from Port Nellie Juan to Main Bay and down Knight Island Passage into Latouche Passage. Some sheen observed in Prince of Wales Passage.
- USCGC *Rush* maintains air traffic control. USCGC *Sedge* passes OWOCRS towline to *Theresa Marie*.

APRIL 8, 1989 (SIXTEENTH DAY)

Skimming operations continue in Main, Eshamay, Herring, and Sawmill Bays and begin between Knight and Green Islands. While GT-185 skimmers are very effective, CG reports that oil recovery rates are reduced to 200 barrels per day due to increasing oil viscosity.

Morning overflight shows occasional light sheen in Perry Passage north of Port Nellie Juan. No oil found in Wells Passage or McClure Island. Light sheen at Port Nellie Juan, Main Bay, and Crofton Island where some beach impact observed. Less than 10 percent of Eshamay Bay covered with sheen, but heavy oil concentrations contained by booms.

Mixture of sheen and mousse observed in northern, eastern, and southern areas of Knight Passage. Sheen and mousse streaks noted in Prince of Wales Passage. Shorelines abutting Latouche Passage show oiling with mousse and sheen offshore. Sheen with patches of heavy oil observed off southern Montague Island. Trajectory of spill curving into Anchorage OSC jurisdiction. Valdez and Anchorage OSCs deploy MARCO Class V skimmers in defensive positions in Gulf of Alaska.

DOI reports that 529 birds and 94 sea otters have died. The Fish and Wildlife Service (FWS) has prepared a list of wildlife areas believed to be at risk from the oil spill.

USCGC *Rush* maintains air traffic control, works 303 aircraft, and processes over 2,126 radio contacts. USCGC *Ironwood* continues installation of mooring systems in Sawmill Bay.

CG Boating Safety Team enroute to Whittier to conduct safety boardings on volunteer recreational boats used for retrieval of dead wildlife.

In Whittier, DOI is setting up a wildlife collection station and Exxon establishes a boat-cleaning station.

0630 Overflights conducted by NOAA.

0945 USCGC *Rush* reports heavy concentration of oil from Bass Harbor to eastern end of Smith Island. Slick apparently one mile wide. Exxon officials notified and a skimmer crew diverted.

Response actions stepped up at Sawmill Bay and Snug Harbor, where eight skimmers, five vessels, and an oil recovery barge are involved. Over 5,000 feet of boom deployed in King Bay. Fully-boomed *Exxon Valdez* remains anchored off Naked Island with a 32-foot water cushion for each of its damaged tanks. Light sheen reported inside the boom.

FWS conducts aerial shoreline survey from Prince William Sound to Homer.

2130 Captain Ryan of the Canadian Coast Guard says Canadian skimming equipment has recovered 666 barrels.

2200 USCGC *Sedge* enroute to Snug Harbor.

2205 Summary of clean-up activity provided by Exxon as of this date:

Initial Amount of Oil Spilled:	240,000 barrels
Amount Recovered:	17,000 barrels
Amount Evaporated:	77,000 barrels
Amount Dispersed:	11,000 barrels
Amount in Prince William Sound:	45,000 barrels
Amount in Gulf of Alaska:	45,000 barrels
Amount on Beaches:	45,000 barrels

CG AIREYE overflights reveal scattered mousse and sheen from Cape Junken to the southern section of Otter Island. Some oil apparent around Chiswell Island. Light sheen with thin strands of mousse apparent north of Hinchinbrook Island. Light beach impacts were observed on the northeastern part of Montague Island.

Exxon divers complete drilling eight stopper holes in *Exxon Valdez* to arrest fractures.

APRIL 9, 1989 (SEVENTEENTH DAY)

Spill seems to be stabilizing. CG reports leading edge of the spill has not advanced in two days. Sheen with streaks of congealed oil extends from northern Naked Island through the lower passages and into Gulf of Alaska. Heavy sheen reported around Snug Harbor.

Sawmill and Herring Bays and Snug Harbor continue to hold highest response priority. Arriving at Sawmill Bay to join the response effort are a floating hotel (housing 1,000 response personnel), five waste-oil barges, five waste-oil "doughnuts," and 100 small skiffs.

USCGC *Rush* works 320 aircraft and has processed 2,180 radio contacts in the last 24 hours.

1430 VADM Robbins, CG PACAREA Commander, returned to Valdez.

1515 Joint NOAA/USCG overflight reports no oil found on Hitchinbrook Island near the Hawkin's Island cut-off.

1945 Aerial reconnaissance reports leading edge of spill is 25 miles southeast of Nuka Island. Slick runs close to the shore from Cape Junken to the vicinity of Resurrection Bay, where fresh water runoff and fjord winds are pushing the spill offshore. Major spill impact observed in Chiswell Islands due to combination of steep shoreline and high wave energy. Offshore slick appears as 20 to 30 mile sheen with widely separated areas of mousse.

Weather hinders clean-up operations. Many skimmers operating in exposed areas head for more protected waters.

CG air operations total 38 hours of flight time.

In the OSC Anchorage-Gulf of Alaska operational theater, the USCGC *Yocona* has sailed from Kodiak to Seward and presently is in Seward. A Navy MARCO skimmer is on scene. An 84-inch boom at Seward cannot be deployed by USCGC *Yocona* and *Planetree* due to adverse weather conditions offshore. Test using herring nets to break up areas of oil considered partially successful.

Two 65,000-gallon capacity bladders enroute to Seward for use in skimmer operations.

USCGC *Morgenthau* is stationed at the southeast entrance to lower Cook Inlet monitoring traffic. Remote weather stations are planned for Barwell Island, Outer Island, Chugach Island, and Marmot Island.

14,000 feet of boom deployed at Resurrection Bay and Kenai Fjords National Park.

APRIL 10, 1989 (EIGHTEENTH DAY)

Leading edge of the slick located 20 miles south of Nuka Sound.

USCGC *Sedge* conducts shoreline survey of Snug Harbor with a small boat. Only a very light sheen observed approximately one mile offshore. Four foot wide band of black oil observed at the high water mark on the beach.

FWS personnel continue shoreline aerial survey from Prince William Sound to Kodiak. On the ground, a survey of deceased wildlife is conducted on the north end of Knight Island.

USCGC *Rush* works 324 aircraft, processes 2,192 radio contacts, and then puts into port for logistic resupply. USCGC *Rush* is relieved of air traffic control responsibilities by USCGC *Sedge*.

Poor visibility and high variable winds hamper overflight assessments.

1400 USCGC *Ironwood* enroute from Snug Harbor to Valdez and reports every five miles on concentrations of oil. *Ironwood* reports light sheen 500 to 1,000 yards wide between Sleepy Bay and Point Helen. Several ribbons of oil approximately 10 by 420 yards reported three miles south of Discovery Point.

1845 USCGC *Storis* loaded with approximately 2,000 feet of membrane-type boom for transport to Kitoi fish hatchery at Afognak Island.

At OSC Anchorage-Gulf of Alaska zone, gale force winds and 20-foot seas prevent offshore operations. Exxon establishing an otter cleaning station in Seward. 2,100 feet of boom are deployed at Tutka Bay fish hatchery.

Two Navy MARCO skimmers with CG bladder arrive at Homer.

Six fishing vessels equipped with herring nets depart Kodiak to join 30 other fishing boats at Seward to form mobile response unit in attempt to break up oil patches off Cape Resurrection. Additional 10,000 feet of boom will be deployed with these vessels.

APRIL 11, 1989 (NINETEENTH DAY)

Total of nearly 200,000 feet of boom have been deployed to protect endangered areas in Prince William Sound. Included are 85,000 feet of containment boom, 98,000 feet of absorbent boom, and 12,000 feet of boom surrounding *Exxon Valdez* anchored off Naked Island.

39 skimming operations shut down by rough seas on April 10 have yet to resume operations in the natural collection area of Snug Harbor, Sawmill Bay, Point Helen, Latouche Pass, and Herring Bay. Over 80 people are now involved in the cleanup of Naked Island, with 500 more workers expected to join clean-up efforts by April 13.

Oil moved westward, forming long, well-defined bands of mousse along eastern shore of Latouche, Knight, and Ingot Islands. Light sheens observed in Main and Eshamay Bays. Large patch of sheen/mousse combination approximately six miles long and two miles wide observed west of Eleanor Island, extending nearly into entrance of Main Bay.

Small amounts of sheen and mousse observed in Perry Island area. Herring Bay still heavily oiled. Large band of sheen and mousse parallels southeast end of Knight Island. Bay of Isles beaches also heavily oiled. Wind and wave conditions over past two days have mixed and dispersed the larger concentrations of oil in open waters of Prince William Sound.

Exxon divides Prince William Sound into four quadrants, each with a command and control vessel (with PACAREA Strike Team member aboard) to coordinate oil recovery operations. Quadrant zone one represents area north of Knight Island, Quadrant zone two represents areas west, and Quadrant zone three areas east. Quadrant zone four represents areas south of island. Areas other than Prince William Sound are designated zone five.

Exxon Valdez is subject of diving survey. Repairs made to fractures in hull of number four starboard tank. Vessel engines are checked **and** considered operational. To date, 19,000 barrels of oil recovered, but bad weather hinders future recovery operations.

- 0340 USCGC *Morgenthau* ordered to mouth of Resurrection Bay to coordinate efforts to break up oil by fishing vessel fleet and Exxon spotter plane.
- 1445 Potato Point Radar Site becomes inoperative, forcing OSC to close the Valdez Narrows to vessel traffic.
- 1500 Radar site reactivated and port reopened.

APRIL 12, 1989 (TWENTIETH DAY)

CG helicopter overflight reports leading edge of slick located 30 to 40 miles southeast of Gore Point.

Snug Harbor and the Bay of Isles relatively free of oil, but shorelines are extensively oiled.

- 1535 ADM Yost, Commandant USCG, arrives at Elmendorf AFB, Anchorage. He returns as the President's and the Secretary of Transportation's representative to oversee the spill cleanup. He is met and briefed by VADM Robbins and RADM Nelson.

APRIL 13, 1989 (TWENTY-FIRST DAY)

CG monitor and vessels assigned to each of five designated clean-up sectors. Dispersant tests show no effect on mousse and little effect on sheen.

- 1122 ADM Yost meets with Exxon officials to establish clean-up priorities. Exxon tasked with submitting a beach clean-up work plan. Exxon temporarily suspends shoreline cleanup pending submission and approval of the plan.
- 1330 RRT meeting held.
- 1800 Transfer of oil slops from T/S *Exxon Valdez* completed. Internal survey underway.

1900 ADM Yost briefs operations committee on his purpose and function as President's representative.

APRIL 14, 1989 (TWENTY-SECOND DAY)

1115 Commandant meets with Governor Cowper and Commissioner of ADEC to discuss clean-up progress and strategies. Commandant also briefed by LT GEN McInerney on results of DOD assessment team study.

1300 RRT meeting held.

1314 ADM Yost provided status report during telecom with President Bush. The effectiveness of hot water/steam cleaning of shoreline discussed, and a status report provided by ADM Yost.

1500 LT GEN McInerney, ADM Yost, and VADM Robbins meet. DOD support resources discussed and additional resources secured, including COE Dredge *Essayons* and U.S. Navy Ship *Juneau*.

1700 ADM Yost meets with top Exxon officials. He presents them with a list of 50 beaches requiring cleanup. ADM Yost is putting pressure on Exxon to provide additional personnel within 10 days.

2000 ADM Yost meets with SSC and operations committee. The need to protect Seward, Homer, and Kodiak is discussed, as is forthcoming Exxon shoreline clean-up plan.

2100 Shoreline Clean-up Committee approves use of wash-vacuum oil cleaning system (VIKOVAK) on eastern shore of Smith Island. Committee also approves test cleaning using hot/cold/high-pressure water flushing with VIKOVAK applications on northern portion of Smith Island. Instructions given to avoid all living species, backshore and upper intertidal areas, and use of high-pressure water or steam where invertebrates and seaweed exist.

APRIL 15, 1989 (TWENTY-THIRD DAY)

0905 ADM Yost, VADM Robbins, and NOAA rep conduct overflight of Northwest Passage to observe skimming.

Concentrated skimming operations continue in many areas. Ten skimmers and eight CG cutters operating on scene.

RADM Nelson departs to resume duties as Commander of Seventeenth CG District.

1400 Hydrovac pumping system transferred to Zone two to speed offloading of skimmers there. Hydrovac systems considered only effective pumping system for the viscous, debris-laden oil that is difficult to transfer through integrated skimmer pumping systems.

1600 Vice Admiral Robbins (USCG) becomes federal OSC (FOSC).

1700 Commandant meets with representatives of Exxon, ADEC, and fishermen. Exxon presents shore clean-up execution plan.

1900 FO SC approves shoreline clean-up work order for Eleanor Island.

1900 ADM Yost attends operations committee briefing to discuss the day's developments and clean-up actions to be taken outside Prince William Sound.

APRIL 16, 1989 (TWENTY-FOURTH DAY)

0930 Commandant, FOSC, and several federal, state, corporate, and press representatives attend shoreline washing experiment and demonstration conducted by Exxon on southwest Eleanor Island.

Exxon submits shoreline clean-up execution plan to FOSC and staff for review.

Prince William Sound overflight shows significant change in the path of oil caused by changes in wind direction. Large concentrations of mousse and sheen previously seen near Eleanor and Ingot Islands now being driven southwest towards Falls and Main Bay and Lone, Perry, and Culross Islands. Significant shoreline impact anticipated there. Projections indicate oil will remain in that vicinity and will not migrate into Wells Passage or Port Nellie Juan. Overflight conducted in the area of Gore Point shows shoreline impacts. Remaining oil in the gulf between Cape Junken and the Chugach Islands may be driven northward and may reach shoreline in that area due to predominantly southeast winds.

Clean-up operations temporarily stopped due to reports of exposures to harmful vapors. Air quality monitoring shows exposure limits within safety guidelines.

1800 ADM Yost meets with operations committee. Alternate methods of beach cleanup demonstrated earlier discussed and evaluated. ADM Yost expresses concern over the high number of skimmers that he observes not operating during his earlier overflight.

APRIL 17, 1989 (TWENTY-FIFTH DAY)

Skimmer operations are redirected in order to concentrate on near-shore areas to recover larger amounts of accumulated oil more effectively.

Salvage of *Exxon Valdez* continues. Box patches installed from frame 1 to fore and aft bulkhead. All 'hangers: (hanging steel pieces) removed from tank numbers 1C, 2C, and 3C. Divers conduct survey of tank number 1S.

Joint command communications network established to connect primary command nodes for overall operations coordination.

1000 Commandant meets with lead agencies to discuss comments on Exxon workplan.

1300 Commandant approves workplan and presents comments to Exxon officials.

1400 Captain Crowe (USCG) assumes duties as Chief of Operations.

1600 Captain Roussel (USCG) designated assistant OSC for spill outside Prince William Sound. Vice Admiral Robbins remains FOSC for entire spill.

1900 ADM Yost and executive committee meet. He urges immediate pursuit of shoreline cleanup using acceptable methods.

APRIL 18, 1989 (TWENTY-SIXTH DAY)

1315 ADM Yost, FOSC, and RADM Baker, USN, Commander Third Amphibious Group discuss naval support of cleanup.

1330 Visiting Florida DNR personnel discuss cleanup with FOSC.

1400 ADM Yost departs Valdez for Anchorage.

Skimming operations center on heavy concentrations of oil near Perry, Long, and Culross Islands.

Nine CG Cutters operating in area. Total of 53 vessels, including 33 skimmers on scene.

Prince William Sound overflight reveals heavy patches of oil from Wells Passage to Lone Island. Oil sheen collecting in Port Nellie Juan. Light winds keeping oil basically immobile. New light oil sightings on south side of Lone and Eleanor Islands and south to Smith Island. Overflights continue to show sheen and mousse patches from Chugach Islands east to Cape Resurrection. Sheen and mousse sighted in vicinity of Shuyak Island. No oil sighted along beaches of Katmai National Monument. Very light tar ball splattering Seward's 2,000-foot beach front. No other evidence detected.

Soviet skimmer M/V *Vaydagursky* receives approval for thirty-day entry into U.S. waters. Approval includes authorization to work within three miles of land from Valdez to Homer and around the Kodiak Archipelago, and to make port calls.

APRIL 19, 1989 (TWENTY-SEVENTH DAY)

- 0700 Two Navy MARCO Class V skimmers, two Class XI skimmers, and two Exxon contract skimming vessels deployed at leading and trailing edge of heavy oil concentration in Perry Passage. Five Navy MARCO Class V skimmers and Exxon contract skimmers are deployed in the bays west of Eleanor Island to collect oil pushed by westerly winds. Three Navy MARCO Class V skimmers deployed west of Squire Island.
- 1000 USCGC *Sweetbrier* on scene at Esther Island hatchery to deploy SUPSALV mooring system for protective booming operations.
- 1100 ADM Yost and FOSC attends luncheon with mayors of affected towns prior to ADM Yost's departure from Anchorage.
- 1200 Soviet M/V *Vaydagursky* skimmer vessel arrives at Seward. CG representatives board vessel with interpreter, pilot, and VECO representatives (Exxon contractor) to discuss proposed operations. Vessel currently refueling and preparing for skimming operations near mouth of Resurrection Bay.
Salvage operations continue. All tanks except number 4S are inerted. Tank number 4s is opened and safe for work. Three box patches installed in the tank over the small 'repaired' fractures. Tank number 4s has been repaired temporarily.
- 1300 FOSC meets in Homer with RRT to discuss shoreline cleanup.

APRIL 24, 1989 (TWENTY-EIGHTH DAY)

- 0930 FOSC briefs Secretary of Interior Lujan, and Congressmen Young, Galley and Weldon.

Shoreline activities continue on Naked Island. Over 250 Exxon contractor personnel are supporting clean-up operations in four areas on north side of Naked and Peak Islands.

Nearly 41,062 barrels of oil and water mixture and 14,270 barrels of oil transferred to a barge alongside *Exxon Valdez*.

State of Alaska-funded and constructed Joint Communication Center added to the response communications network.

Army Corps of Engineers (ACOE) dredge *Yaquina* deployed as a skimmer, recovers 1,100 barrels of oil. Total of 53 vessels, including 35 skimmers, are performing oil recovery operations.

APRIL 21, 1989 (TWENTY-NINTH DAY)

1300 RRT teleconference updates members and tasks them with investigating use of COREXIT 7664 dispersant for shoreline cleanup.

Air Force has transported total of 928 tons of response equipment by 15 C-5 missions and 97 tons of equipment by four C-141 missions. Salvage operations to cut hangars from bottom of *Exxon Valdez* continue. Draft proposals for tank and hull cleaning presented to CG.

High volume/low pressure beach washing applied by 250 Exxon personnel to Naked Island shoreline. CG reports 240 feet of shoreline cleaned.

Skimmers move into Knight Island passage area for oil recovery. MARCO skimmer working in Sawmill Bay in concert with CG monitor. OWOCRS and 84-inch boom deployed in Resurrection Bay.

M/V *Vaydagursky* with CG monitor onboard working with two tugs to rig skimming booms in Resurrection Bay. 58 vessels, including 37 skimmers, are operating as recovery or support craft.

APRIL 22, 1989 (THIRTIETH DAY)

Divers continue to cut hanging steel pieces from *Exxon Valdez* hull. Stopper holes are drilled at ends of all transverse fractures. ADEC personnel scheduled to arrive on M/V *Winter King* to monitor water quality and observe repairs. Some oil continues to surface from bilge keels where it is trapped.

Shoreline clean-up plan for Applegate Rock area approved by FOSC. Land use permit for clean-up operations on all state-owned tide and submerged lands received from State of Alaska for 1989.

Skimmers in Resurrection Bay unable to pump debris-contaminated, weathered oil. Mr. Clean Class III skimmer recovers oil/mousse off Gore Point. USSR skimmer *Vaydagursky* shut down for modifications. It had recovered 12 barrels of oil.

APRIL 23, 1989 (THIRTY-FIRST DAY)

Skimming operations continue to maximum degree possible in Prince William Sound Upper Passage, Northwest Bay, Lower Knight Island Passage, and Eshamay Bay. Exxon estimates 2,990 total barrels recovered on April 22. Adverse weather forces halt of skimming operations.

Vessel with 4,800 feet of boom and U. S. Navy MARCO skimmer dispatched to Kitoi Hatchery, Izhut Bay. Eight fishing vessels from Seldowa and Port Graham deployed to Flat Island. They are towing herring nets in attempt to collect mousse and tar balls in area.

Bird cleaning station opens at National Guard Armory and otter station at National Marine Fisheries Services site, Gibson Cove. Alaska Department of Fish and Game closes herring fishery on north and west side of Afognak Island due to sheens in area. Boat cleaning station operational at Herman's Harbor,

CG and Exxon representatives visit villages on Kodiak Island to gather and disseminate information.

APRIL 24, 1989 (THIRTY-SECOND DAY)

Cutting hangers from *Exxon Valdez* completed. Drilling stopper holes at end of fractures continues. Stripping Forepeak and number 1C tank to be completed. Oil in number 1C tank to be boomed to reduce oil leaks. ADEC personnel on M/V *Winter King* alongside *Exxon Valdez*.

Adverse weather continues to hamper efforts to skim oil. ACOE Dredge *Yaquina* with CG skimming barrier manages to operate in South Night Island Passage and Mummy Bay. Two SUPSALV skimmers work in Northwest Bay. Remainder of 58 vessels, including 37 skimmers, stay in sheltered waters. Two hundred feet of shoreline cleaned during last two days.

CG and Exxon personnel brief Senator Stevens.

APRIL 26, 1989 (THIRTY-THIRD DAY)

Drilling of stopper holes continues on *Exxon Valdez*. Booming of oil in tank number 1C in progress.

Adverse weather continues to hamper skimming. All western Alaska skimmers, except for Mister Clean III, attempting to get to Division Bay, Naka Passage to skim oil/mousse concentrated in that area. Approximately 15,000 feet of boom arrive in Homer and will be distributed as needed in area by MAC Group. A total of 58 vessels continue to be involved in operation, but 42 of these now are skimmers.

Joint Communications Center now operational. Phone patch capability of this system allows total interconnections among all deployed units ashore or afloat.

1900 FOOSC attends evening operations meeting with Exxon personnel onboard the U.S. Naval Vessel *Juneau*.

APRIL 26, 1989 (THIRTY-FOURTH DAY)

Tank cleaning and repair activities on *Exxon Valdez* continue. Four major networks give coverage to existence of Coast Guard tapes of radio conversations with *Exxon Valdez* at time of grounding.

Clean-up operations in western Gulf of Alaska continue to be hindered by adverse weather. Due to debris-laden, weathered condition of recovered oil, offloading in both western Gulf of Alaska and Prince William Sound is slow and difficult. Various super-suction devices have been tried with limited success. The operation has been enhanced by heating the oil with stem coils, but it takes two to two-and-a-half hours to heat approximately 32 barrels.

300 feet of shoreline cleaned in Northwest Bay by April 25. Multiagency monitoring program is established to ensure that all shoreline segments will be cleaned in the presence of a federal and state monitor.

58 vessels remain in clean-up operation; 42 are skimmers.

1730 CAPT Calhoun, USCG, CO, MSO Portland, OR. arrive on scene to survey *Exxon Valdez* damage and condition.