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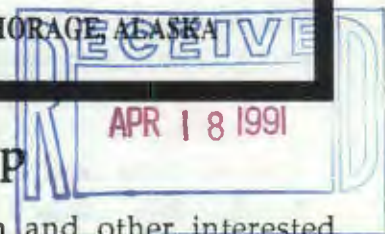
ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL SPILL CHRONICLE

VOL 3, NO. 4

APRIL 16, 1991

ANCHORAGE, ALASKA



Spring Shoreline Survey Shaping Up

Anchorage — Planning is underway for what may be the last major interagency survey of shorelines fouled following the Exxon Valdez oil spill.

Representatives of state and federal agencies, Exxon, and land owners have been meeting through the winter to plan the survey, expected to begin April 26 and continue through May. Groups of specialists, scientists and landowner representatives will assess conditions of shorelines in Prince William Sound and the Gulf of Alaska oiled following the March 1989 grounding of the Exxon Valdez. This information will be used to develop work plans for the 1991 cleanup season.

"Exxon and the Coast Guard have indicated that we probably won't have another big interagency survey like this," said John Bauer, head of cleanup monitoring for the Alaska Department of Environmental Conservation.

Bauer said there will probably be other surveys done by individual agencies in future years, such as by DEC, the National Oceanographic and Atmospheric Administration or the National Park Service. The state might want to monitor long-term effects at different sites, but no planning has started yet, Bauer said.

The principal state goals for the cleanup are to target sites for 1991 cleanup work, and to fully document and map the subsurface oil, especially at locations at which work is unlikely or impossible, said Ernie Piper, the State On Scene Coordinator.

"We plan to put this information on a DEC database of contaminated sites, so that landowners,

recreationists, fishermen and other interested groups can get access to that information when they need it later on," Piper said. "We want to make sure we've looked everywhere we think oil might still exist."

"We want to make sure we've looked everywhere we think oil might still exist."

Ernie Piper, ADEC

The 1991 survey, dubbed the May Shoreline Assessment Program or MAYSAP, is scheduled in three phases, with five 11-member teams based on vessels and one team working from helicopters. Phase I will take place during April 26-May 5, Phase II from May

6-11, and Phase III during May 12-28. The break occurs between Phase II and III because of unfavorable tides.

The surveys are expected to be complete about the end of May but could extend into June if survey rates are slower than expected. Coast Guard Rear Admiral David E. Ciancaglini, the Federal On Scene Coordinator, has said that cleanup work will commence on June 1.

A pair of workers accompanying each team will pick up debris and small patches of asphalt or tarballs if found during the survey. The other team members include an oil geomorphologist, a biologist, a skiff operator, and representatives from

See Survey, Page 4

INSIDE:

Legislative Hearings, page 2
Damage studies released, page 3
Bald Eagle finds new home, page 4
NOAA study, page 4
Ops Meeting Changed, page 5

Alaska Legislators Hold Hearings on Spill Settlement

Juneau — A series of meetings to take public comment on the proposed Exxon Valdez settlement are wrapping up this week, lawmakers said.

The House and Senate special committees on the Exxon Valdez Spill Claims Settlement have conducted meetings via teleconference from Juneau and Anchorage. The House panel also took their show on the road, holding meetings in Seward, Homer, Kodiak and Cordova. The last House teleconference is scheduled originating in Juneau, at noon on Wednesday, April 17.

"It's unusual for the public to be given so much opportunity to comment on legal matters," said Rep. Max Gruenberg, who chairs

"The public comment the Legislature receives will play an important role in determining whether to accept the civil settlement."
Rep. Max Gruenberg

the House Committee. "The public comment the Legislature receives will play an important role in determining whether to accept the civil settlement." Sen. Dick Eliason chairs the Senate committee.

Attorney General Charles Cole and Commissioner of the Alaska Department of Fish and Game Carl Rosier also attended some of the hearings to help answer questions from the audience and lawmakers.

When Governor Hickel referred

the settlement to the Alaska legislature for an advisory opinion, the Senate and House set up special committees to evaluate the settlement and report back to the legislature. Both houses will come to a consensus and report their findings and recommendation to Gov. Hickel so he can relay the state's answer to U.S. District Judge Russel Holland in Anchorage by the May 3 deadline.

Gov. Hickel can override the legislature's recommendations, but Attorney General Charles Cole has indicated that the administration would probably abide by the legislature's opinion either way.

"If the legislature does not approve the settlement, I will not proceed," Cole said at the Cordova hearing.

Cordovans crowded the library meeting room at the House panel meeting there on April 14. Legislators accepted testimony in person and in writing from meeting participants, including representatives of fisheries organizations, native groups, and individual testimony.

"I have been intimately involved with the Exxon Valdez oil spill since before 7:00 am on March 24, 1989," said Marilyn Leland of Cordova District Fishermen United. "More than two years later, the oil spill still dominates my life."

Leland, who is executive director of CDFU, said she thinks it is too soon to determine the value of injuries resulting from the spill, and that the figure set aside in the settlement is too small

to be an incentive for oil companies to prevent future

"I have been intimately involved with the Exxon Valdez oil spill since before 7:00 am on March 24, 1989. More than two years later, the oil spill still dominates my life."

Marilyn Leland
CDFU

spills.

"We ask the legislature to postpone approval of the settlement," Leland said, until more information is available and until provisions are added to the settlement to give the legislature and the public more control over how the money is spent.

Patience Faulkner, providing testimony on behalf of Eyak natives, said that her group strongly opposes the settlement because native groups were not involved in the settlement negotiations, the money set aside for restoration is inadequate, and the settlement does not address social, cultural and community damages.

"The natural resource damage value can eventually be quantified; yet the damage to the human element cannot. The disruption to our lives in 1989 is beyond description," Faulkner said.

Copies of the hearing notes and written testimony can be obtained from the Juneau Legislative Information Office, P.O. Box Y, Juneau, AK 99811.

Summary of Resource Damage Findings Released

A summary of findings from state and federal researchers assessing damages to natural resources resulting from the Exxon Valdez oil spill was filed in Anchorage federal court and released to the public on April 8.

The 18-page summary lists preliminary results of studies designed to measure injuries to birds, mammals, fish and other wildlife, marine and land-based wildlife habitat, and archaeological and subsistence resources.

In some cases the damage to wildlife species reported is more severe than previously thought and may be continuing, according to the report.

"This is the first time we've gotten results from systematic studies of the whole region, as opposed to anecdotal information," said Jim Gibeaut of the Alaska Department of Environmental Conservation. Gibeaut is the head of DEC's science studies on the spill.

"What is frustrating is to find that the oil is persisting down to 100 meters depth (underwater). That's the worst news of all, I think."

The summary indicates that the animals which seem to have been hardest hit were seabirds, sea otters, bald eagles and possibly killer whales. Gibeaut said researchers knew from past oil spills that birds and otters would be affected, but scientists will end up with more in depth information on those effects from the Exxon Valdez studies.

"The difference here is that we've quantified a lot more than previous spills, by counting the dead birds and other dead animals, and by noting the location and amount of persisting oil on the beaches and in the shallow subtidal regions. I don't think that has been done as extensively before, not for a large spill anyway," Gibeaut said.

U.S. Fish and Wildlife officials initiated a program soon after the March 1989 oil spill to recover bird

and other animal remains in the spill affected areas, partly to prevent their being eaten by scavengers such as eagles and bears. A total of 36,471 birds were collected, and a U.S. F&WS paper published in January 1990 estimated that number represented only 10-30 percent of the actual deaths. According to the report released last week, the best

approximation now available is that between 340,000 - 390,000 birds died.

Sea otter populations in Prince William Sound and the Gulf of Alaska were estimated to be as high as 30,000 before the spill. The new report estimates 3,500-5,000 animals were killed directly from effects of the oil spill. Otter necropsies also indicated damage from inhaling toxic aromatic compounds evaporating from the crude and from ingesting the oil as they tried to clean their fur.

State and federal scientists expect to continue

researching the effects of the spill in 1991 "and thereafter until the process is complete." A number of monitoring projects will measure the natural recovery of wildlife and other resources affected by the spill.

"There's another whole field season that's going to be conducted (this year), then it will take another one to two years after that to get the final reports out," Gibeaut said.

Restoration programs are expected to begin in 1991. The summary indicates the restoration projects will be adjusted as results from the resource damage studies indicate where efforts should be concentrated.

To request a copy of the summary, write the U.S. Justice Department, Oil Spill Information Center, 645 G Street, Anchorage, AK 99501, or telephone 907/278-8008.



NOAA Study of Hot Water Wash and State's Comments Available

The National Oceanographic and Atmospheric Administration released a report on April 9 with their evaluation of the effects of hot water washing on Alaskan shorelines to remove oil contamination following the Exxon Valdez oil spill.

The report, titled "Evaluation of the Condition of Intertidal and Shallow Subtidal Biota in Prince William Sound Following the Exxon Valdez Oil Spill and Subsequent Shoreline Treatment," is available from the U.S. Justice Department, Oil Spill Information Center, 645 G Street, Anchorage, AK 99501, or by calling 907/278-8008.

For a copy of comments and reviews of the study by the Alaska Departments of Environmental Conservation and Fish and Game, contact the Public Information Office, ADEC Exxon Valdez Oil Spill Response Center, 4241 B Street, Suite 304, Anchorage, AK 99503, or call 907/563-1126.

Survey, Cont. from page 1

the U.S. Coast Guard, National Oceanic and Atmospheric Administration, the Alaska Department of Environmental Conservation, Exxon, the land manager, and a representative from the local community.

The survey teams are expected to document surface and subsurface oiling conditions and record their observations on forms and maps and with photographs. The teams will also collect information on intertidal organisms and wildlife observed. Reports from each day's observations will be sent to Anchorage daily.

A total of 598 sites or subdivisions are expected to be surveyed by the groups, 436 in Prince William Sound, 101 in Kenai, and 61 in Kodiak. This includes 48 subdivisions with 54 anadromous fish streams which have been identified by the Alaska Department of Fish and Game.

Valdessa Finds a New Home

Sitka — Volunteers at the Alaska Raptor Rehabilitation Center in Sitka, Alaska, couldn't release Valdessa to the wild but they found her a good home.

The Ross Park Zoo in Binghamton, New York accepted Valdessa, the first bald eagle captured live after the Exxon Valdez oil spill of March 1989. Zoo workers paired her up with Claws, formerly the zoo's only bald eagle.

"They hit it off immediately," said Steven Contento, director of the Ross Park zoo.

Valdessa was captured in Prince William Sound in April of 1989. Volunteers at the bird rescue center in Valdez washed her to remove oil coating her feathers. When found she was feeding on the oil soaked carcass of an otter. She was then shipped in a large dog kennel to the ARRC, the state's only raptor treatment and rehabilitation center qualified to handle bald eagles at the time. Volunteers at ARRC named the adult female bald eagle after the town of Valdez.

After two years of recuperative care, Valdessa regained her health but not the full use of her wings, said Lynn Vaught of the ARRC. Center volunteers searched until they found a zoo or captive breeding program with the proper facilities and staff to care for bald eagles. Valdessa arrived in the upper New York State town on April 9.

Three other unreleasable bald eagles picked up following the Exxon Valdez oil spill remain in the care of the Bird Treatment and Learning Center in Anchorage, and one additional bird was placed at the Gladys Porter Zoo in Brownsville, Texas, as part of a captive breeding program.



Ops Meeting Location Changed

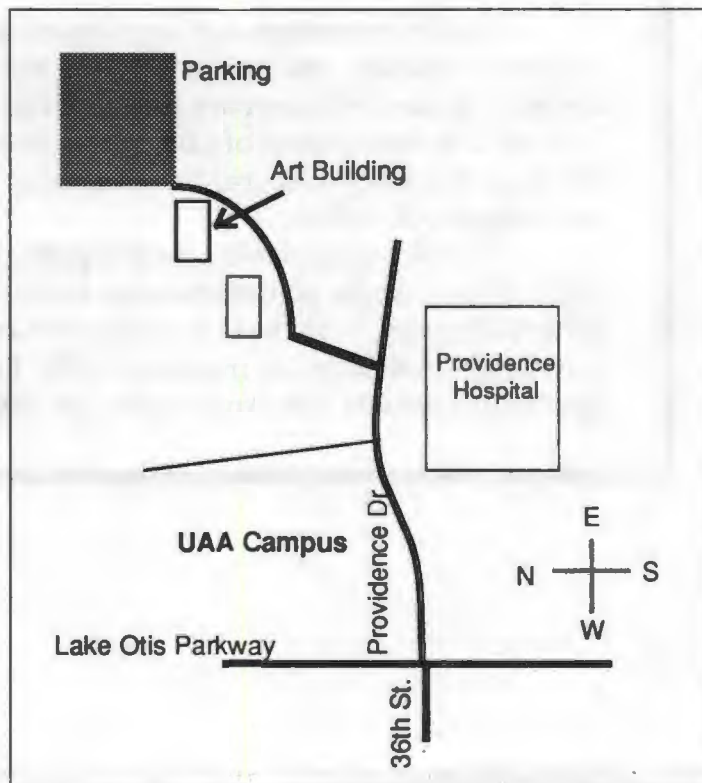
The Exxon Valdez Oil Spill Operations Steering Committee meeting scheduled for April 23 at 5:00 pm has been moved to the Room 220 Theatre in the Art building on the University of Alaska Anchorage campus, 3211 Providence Drive.

The meeting is generating a high degree of interest, Coast Guard officials said, and has been moved to a larger facility to accommodate the public. The date and time of the meeting will remain the same.

The agenda for the meeting will include cleanup plans for the 1991 season, the May shoreline survey program, and information about how the cleanup would proceed under the proposed civil litigation settlement under consideration by the Alaska State Legislature and the U.S. Congress.

Audioconference facilities will still be available for any communities who wish to participate. For more information on audioconferencing, call Lt. Robert Forgit at 263-1728.

A map showing the general location of the Art building on the UAA campus is to the right.

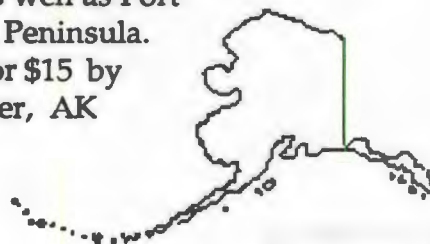


Poisoned Waters: Alaska Natives and the Oil Spill

A one-hour radio documentary about the native Alaskan perspective on the Exxon Valdez oil spill was aired during March on the Alaska Public Radio Network.

Entitled "Poisoned Waters: Alaska Natives and the Oil Spill," the documentary was produced by Susan Kernes of KBBI in Homer. It focused on the Chugach Aleut residents of Chenega Bay and Tatitlek in Prince William Sound as well as Port Graham and English Bay, which are located on the Kenai Peninsula.

Audiotape copies of the program may be purchased for \$15 by writing True North Productions, P.O. Box 984, Homer, AK 99603.



Final Comments on Spill Settlement Due April 18

Public comments on the proposed settlement agreement between the United States, the State of Alaska, and Exxon Corp. must be received by April 18, 1991. Written comments concerning the settlement are to be submitted to Thomas A. Campbell, General Counsel of NOAA, U.S. Department of Commerce, Room 5816, Washington, D.C. 20230, and to Barbara Herman, Attorney General's Office, State of Alaska, 1031 West 4th Avenue, Suite 200, Anchorage, AK 99501.

The proposed settlement was published in the Federal Register of Tuesday, March 19, 1991. Copies of the settlement may be obtained from any library which subscribes to the Federal Register, from the U.S. Justice Department Oil Spill Information Center, 645 G Street, Anchorage, AK 99501 or from the ADEC Exxon Valdez Oil Spill Public Information Office, 4241 B Street, Suite 304, Anchorage, AK 99503, 907/563-1126.

OIL SPILL CHRONICLE

State of Alaska

Department of Environmental Conservation

Exxon Valdez Oil Spill Response Center

4241 B Street, Suite 304

Anchorage, AK 99503



Oil Spill Restoration Office
437 E Street, Suite 301
Anchorage, AK 99501





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OIL SPILL CHRONICLE

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State and Federal Agencies Settle with Exxon

Anchorage — Governor Hickel and U.S. Attorney General Dick Thornburgh on March 13 announced that Exxon Corporation and Exxon Shipping company agreed to settle virtually all federal and state civil claims resulting from the Exxon Valdez oil spill.

With payment of \$900 million in damages and \$100 million in criminal fines, Exxon will provide compensation to the state and federal governments for losses incurred after the Exxon Valdez spilled almost 11 million gallons of crude oil on March 24, 1989, officials said.

The settlement also has a reopener clause stating that Exxon may incur an additional \$100 million ten years from now for natural resources damages not currently foreseen. According to the plea agreement, Exxon Shipping Co. will plead guilty to violating the Clean Water Act, the Refuse Act, and the Migratory Bird Treaty Act. Exxon Corporation will plead guilty to violating the Migratory Bird Treaty Act.

"This settlement was the result of a very thorough analysis of the issues," said John A. Sandor, Commissioner of the Alaska Department of Environmental Conservation. "Now we can go on with the business of long-term damage assessment and restoration of Prince William Sound and other coastal areas affected by the spill," he said.

Sandor noted that the settlement terms cover costs incurred to date by DEC as well as the cost of the cleanup activities planned this summer. The settlement also includes expected costs to further assess and restore damaged coastline along the more than 1,200 miles of the spill's path.

The agreement with Exxon states that it is not intended to affect rights and obligations of other parties with oil spill claims, including Alaska natives and other private plaintiffs.

The full settlement is published in today's Federal Register, and will be out for public comment until April 18, federal officials said. State or federal officials have the right to withdraw consent to the settlement agreement within 15 days after the close of the public comment period if it is clear that the agreement is not in the public interest, or if the Alaska legislature does not approve the agreement.

A copy of the settlement may be obtained from any library which subscribes to the Federal Register, or from the Oil Spill Public Information Center, 645 G Street, Anchorage, AK 99501, 907/278-8008.

Written comments on the settlement may be mailed to: Thomas A. Campbell, General Counsel of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Room 5816, 14th Street and Constitution Avenue, NW, Washington D.C., 20250, or to Barbara Herman, Attorney General's Office, State of Alaska, 1031 W 4th Ave., Suite 200, Anchorage, AK 99501.

INSIDE:

State Approves Bioremediation, page 2

Oil Spill Conference, page 3

Public Ops Committee Meeting, page 3

New Reports, page 4

State Approves Bioremediation for 1991 Cleanup Season

ANCHORAGE—State of Alaska officials have approved use of fertilizers in the 1991 cleanup season to assist microbial breakdown of oil remaining on beaches fouled by the Exxon Valdez oil spill of two years ago.

Based on recommendations from staff of the DEC office monitoring Exxon Valdez spill response work, John Sandor, Commissioner of the Alaska Department of Environmental Conservation, approved use of the fertilizers during the 1991 field season in a March 5 letter to RADM David E. Ciancaglini, the Federal On Scene Coordinator.

The state grants approval for use of the fertilizers Inipol EAP 22 and Customblen, contingent on the same application rates, delivery systems, and operational guidelines as during the 1990 season, Sandor said. State officials asked Admiral Ciancaglini to request updated operating guidelines from Exxon, allowing five working days for review and comment from state agencies, said Ernie Piper, the State On Scene Coordinator.

The decision followed technical meetings on Feb. 19-22, when researchers and government officials reviewed data on the use of fertilizers to remove oil remaining in Alaska shorelines.

Final approval for use of any

chemicals will come through the Regional Response Team, a federal and state interagency committee which by law must be involved in response to spills of any hazardous substance or application of chemicals in the environment, state officials said.

"Generally, my staff and other independent scientists agree that adding fertilizers to the beaches increases the numbers of microbes that degrade oil,"

Ernie Piper
ADEC.

The State of Alaska and the Environmental Protection Agency both hold veto rights on the RRT regarding use of chemicals in a spill response. The group has conferred on a number of decisions regarding treatment of shorelines oiled after the March 24, 1989 incident when the Exxon Valdez hit Bligh Reef in Prince William Sound and spilled 10.8 million gallons of crude oil.

"Generally, my staff and other independent scientists agree that adding fertilizers to the beaches increases the numbers of microbes that degrade oil," said Ernie Piper,

State On Scene Coordinator. However, Piper pointed out that there are enough gaps in the available data that "we should be cautious and judicious in our use of the chemicals."

The scientists at the conference were unable to come to a consensus about the rate at which bioremediation speeds up natural degradation of oil, but they did agree that fertilizers are speeding things up, Piper said.

"Bioremediation appears to be a useful addition to our cleanup toolbox, but I would caution members of the cleanup community and the public against becoming too giddy about the ability of the bugs to solve a problem of this size and complexity," Piper said in a memo to Commissioner Sandor.

There are too many questions left unanswered when scientists try to apply information gathered in carefully controlled laboratory experiments to what actually happens on a beach in Prince William Sound or the Gulf of Alaska, Piper said.

"We've got an open, dynamic marine system with a wide and changing set of ecological variables," which will not ever exactly equate with a laboratory setting, he said.



The OIL SPILL CHRONICLE is published monthly by the Alaska Department of Environmental Conservation. Comments or inquiries should be addressed to: ADEC, Exxon Valdez Oil Spill Response Center, Attn: L.J. Evans, 4241 B Street, Suite 304, Anchorage, AK 99503. FAX: 907/563-1789. Phone 907/563-1126.

State Experts Contribute to Oil Spill Conference

ANCHORAGE — Alaska Department of Environmental Conservation staff who worked on the Exxon Valdez oil spill cleanup presented papers and spoke on panels at sessions of a major international oil spill conference in San Diego March 4-7, state officials said.

Current and former DEC staff presenting papers or participating in panel discussions included John Bauer, Randy Bayliss, James Gibeaut, John Janssen, Al Kegler, Marshal Kendziorek, Dan Lawn, Gene Pavia, Ernie Piper, Steve Provant, and Clay Robinson. The biennial International Oil Spill Conference and Exposition is an important world symposium on oil spill cleanup technology and science.

The conference is jointly sponsored by the U.S. Coast Guard, Environmental Protection Agency, and the American Petroleum Institute.

"This conference is where the state of the art and the state of the science is discussed and shaped," said DEC Commissioner John A. Sandor.

The last conference took place a couple of weeks before the tanker Exxon Valdez grounded on Bligh Reef and spilled nearly 11 million gallons of crude oil in North America's biggest tanker spill. Of more than 130 sessions at this year's conference, at least 38 were directly related to the Exxon Valdez spill.

Copies of the entire Conference Proceedings may be purchased for \$65 by writing: 1991 International Oil Spill Conference, 655 15th St., NW, Suite 300, Washington, D.C. 20005.

To request copies of the papers presented by State of Alaska personnel, write ADEC Exxon Valdez Oil Spill Response Center, Public Information Office, 4241 B St., Suite 304, Anchorage, AK 99503.

Papers presented at the International Oil Spill Conference by State of Alaska staff:

"Response To the Exxon Valdez Oil Spill By The Alaska Department of Environmental Conservation," Erich R. Gundlach, John Bauer, Randy Bayliss, Steve Provant, and Marshal Kendziorek.

"Trends in Natural Removal of the Exxon Valdez Oil Spill in Prince William Sound From September 1989

to May 1990," Jacqueline Michel, Miles O. Hayes, Walter J. Sexton, James C. Gibeaut, and Charles Henry.

"Shoreline Surveys at the Exxon Valdez Oil Spill - The State of Alaska Response," Erich R. Gundlach, Eugene A. Pavia, Clay Robinson, and James C. Gibeaut.

"Initial State of Alaska Response to the Exxon Valdez Oil Spill" Randy Bayliss, Dan Lawn, Al Kegler, Marshal Kendziorek, and John Janssen.



Operations Steering Committee Public Meeting

The Exxon Valdez oil spill Operations Steering Committee will meet on April 23 at 5:00 p.m. at the Anchorage Alaska Legislative Information Office. The meeting will be sponsored by Representative Cliff Davidson of Kodiak, is open to the public and will be available by teleconference to communities requesting to participate.

The Operations Steering Committee is chaired by RADM David E. Ciancaglini of the U.S. Coast Guard, the Federal On Scene Coordinator and Ernie Piper, State on Scene Coordinator.

The meeting is scheduled for the first floor meeting room of the Anchorage LIO, 3111 C St. To arrange to be included in the teleconference, call the LIO teleconference coordinator at 561-7007.

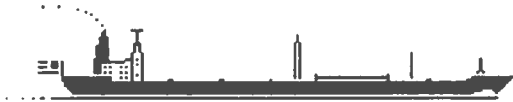
The agenda for the April meeting is not set at this time, but will include topics regarding the 1991 spring shoreline assessment and cleanup plans for the 1991 field season.

New Reports:

NOAA Technical Memorandum NMFS F/NWC-191: Survey of Subsistence Fish and Shelfish for Exposure to Oil Spilled from the Exxon Valdez; First Year: 1989, Usha Varanasi, et al., National Oceanic and Atmospheric Administration/National Marine Fisheries Service, December 1990. This document is available through the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

Valdez Oil Spill Technology: 1989 Operations, Exxon Production Research Company, 1990. Copies are available from Exxon Public Relations, Attn: Karsten Rodvik, P.O. Box 240409, Anchorage, AK 99524-0409.

The 1989 Exxon Valdez Cultural Resource Program, Charles M. Mobley, et. al., Exxon Shipping Company and Exxon Company, USA., 1990. Copies are available from Exxon Public Relations, Attn: Karsten Rodvik, P.O. Box 240409, Anchorage, AK 99524-0409.



Water Quality in Prince William Sound and the Gulf of Alaska, Jeff M. Neff, Arthur D. Little, March 1991. Copies can be obtained by writing Arthur D. Little, 20 Acorn Park, Cambridge, MA 02140-2390.

Lessons of the Exxon Valdez, Rick Steiner, et. al., Alaska Sea Grant College Program, University of Alaska Fairbanks, 1990. Copies available for \$4 from Alaska Sea Grant College Program, UAF, 138 Irving II, Fairbanks, AK 99775-5040.

Oil In the Ocean: The Short- and Long-Term Impacts of a Spill, James E. Mielke, Congressional Research Service, July 24, 1990, CRS Report #90-356. Copies may be obtained from the Federal Oil Spill Public Information Center, 645 G. Street, Anchorage, AK 99501, 907/278-8008, or from Senator Ted Stevens office, 222 W 7th Ave., #2, Anchorage, AK 99513.

Proceedings: 1991 International Oil Spill Conference, sponsored by the U.S. Coast Guard, American Petroleum Institute, and the U.S. Environmental Protection Agency. Copies of the entire Conference Proceedings may be purchased for \$65 by writing: 1991 International Oil Spill Conference, 655 15th St., NW, Suite 300, Washington, D.C. 20005.

OIL SPILL CHRONICLE

State of Alaska

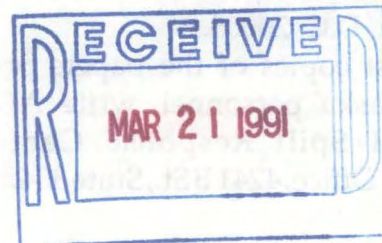
Department of Environmental Conservation

Exxon Valdez Oil Spill Response Center

4241 B Street, Suite 304

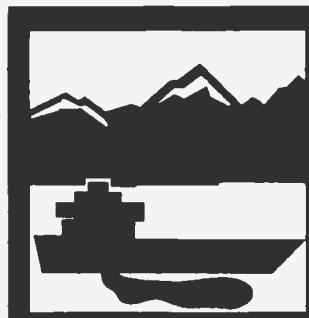
Anchorage, AK 99503

OFFICIAL BUSINESS
STATE OF ALASKA
STATE PENALTY FOR
PRIVATE USE



EPA Region 1 Operations Officer
ATTN: Exxon Valdez Spill Coordinator
222 W. 7th Ave
Anchorage, AK 99513-7588

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ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL SPILL CHRONICLE

VOL 3, NO. 2

FEBRUARY 15, 1991

ANCHORAGE, ALASKA

NOAA Survey Finds Subsurface Oil Remains

ANCHORAGE — Surveys last month of a few heavily oiled beaches in Prince William Sound show little change in condition since the oil first hit the beaches, federal scientists said. There is also evidence that the beaches are recovering from bulldozer work last year, according to National Oceanic and Atmospheric Administration contractors.

The surveys were part of an ongoing study on the effects of the Exxon Valdez oil spill of March 24, 1989, said Joe Talbot of NOAA.

"This was a snapshot look at the conditions this winter," Talbot said. The survey results will be compared with similar data collected last year and compiled with other information into a report scheduled for distribution around the first of March.

The degree of oiling remaining on the shorelines is very different in 1991, said Ernie Piper, the state's spill coordinator. Five months after the spill occurred in 1989, shoreline surveys of all affected regions determined that 108 miles of shoreline were heavily oiled, 108 miles were moderately oiled and 288 were lightly oiled. Surveys of the same regions in August 1990 showed 4.4 miles remained heavily oiled, 9.1 miles moderately oiled, and 14.3 miles lightly oiled. Piper said shoreline that is still heavily oiled will be the last big cleanup problem to deal with in 1991.

Though most locations show significant improvement, some remain almost as heavily oiled as they were in September of 1989 when the NOAA group began their periodic surveys, said Jacqueline Michel of Research Planning, Inc. Michel and Miles Hayes, who were in charge of the survey, are well-known oil spill geomorphologists who have worked as science contractors for NOAA on oil spills for years, Talbot said.

The survey group visited 22 locations in Prince William Sound on the U.S. Coast Guard Cutter

Sweetbriar during the week of Jan. 19-25. They revisited most of 18 sites NOAA has been monitoring since 1989, and also looked at some additional beaches where the sometimes controversial treatment method called storm berm relocation was used during the 1990 cleanup season.

At each location surveyed, the scientists measured physical changes in beach topography, dug trenches, collected samples and estimated the amount of surface and subsurface oil remaining.

Michel reported at a briefing on January 26 that some sites seem to have changed little in the almost two years since the spill occurred and have not been disturbed at all by winter storms. One area on Pt. Helen at the southern tip of Knight Island still showed 100% oil coverage on the surface and heavy oiling throughout a 42 centimeter (about 18 inch) trench, Michel said.

At another survey site in Sleepy Bay on Latouche Island, erosion of the beach surface exposed sediments which still held heavy concentrations of sticky oil.

"There's so much oil (at that site) that we can't differentiate chemically between weathered and unweathered oil," Michel said. "It overwhelms the analysis." Debra Simecek-Beatty, another scientist on the trip, reported a heavy fuel oil-like smell at that location. Simecek-Beatty said that the oil was very soft and pliable. "It goes right down. It's not

See NOAA Survey, Page 3

INSIDE:

Bioremediation meetings, page 2

Spring shoreline survey, page 2

Chronicle index available, page 3

Two new books, page 3

Calendar of events, page 4

Bioremediation Meetings

Officials working on the Exxon Valdez oil spill plan meetings next week to answer questions and review new information regarding the use of bioremediation as a cleanup tool.

Spill officials from the State of Alaska, U.S. Coast Guard, National Oceanic and Atmospheric Administration, and Exxon are expected to meet Feb. 19-22 with bioremediation specialists from the Environmental Protection Agency in Las Vegas, where EPA has a major laboratory facility.

These meetings were originally scheduled for the last week of January, which is why Alaskan agencies said the state's decision on bioremediation would be released on February 1. Since EPA rescheduled the meetings to February, state officials have moved the date for their decision to early March, said Ernie Piper, the state's spill coordinator.

"As before, approval for use of fertilizers to speed the degradation of oil on the beaches will come through the Regional Response Team," Piper said, referring to the group of state and federal agency representatives which have jurisdiction through federal statutes over any hazardous substance spills or application of chemicals in the environment. The State of Alaska casts a deciding vote in the RRT, Piper said.

"We're not going back to square one," Piper said. "We've learned a lot about bioremediation. We're just making sure it's useful under

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Ernie Piper
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Many beaches fouled by the Exxon Valdez oil spill of two years ago are much improved due to cleanup work or to the washing action of storms and tides. Where oil remains on the beaches it is often in a highly weathered state resembling asphalt or tar. In some locations the oil is now below the surface, and is still liquid and largely unchanged from 1989, officials said.

Attendees at the meetings are expected to hear results of new and ongoing research, Piper said. The group plans to examine assumptions made based on prior information and decide if policies and practices need to be revised. Attending for the State of Alaska will be representatives from the Departments of Environmental Conservation, Fish and Game, and Natural Resources. A Prince William Sound community representative is also expected to participate in the meetings.

Spring Shoreline Assessment Set

The fourth major program to assess the conditions of oiled shorelines is scheduled to begin on April 26, officials said.

Teams of specialists from the Alaska Departments of Environmental Conservation, Fish and Game, and Natural Resources, National Oceanic and Atmospheric Administration, U.S. Coast Guard, and Exxon will join representatives from the land owners and local communities to examine hundreds of shoreline segments in Prince William Sound and the Gulf of Alaska.

The groups will look for changes in oiling due to winter storm action and make recommendations on treatment methods and plans to remove oil remaining in the shorelines from the Exxon Valdez oil spill two years ago.

The 1991 MAYSAP - May Shoreline Assessment Program - follows in the steps of the ASAP - August Shoreline Assessment Program and the SSAT - Spring Shoreline Assessment Program, both conducted in 1990.

Only State of Alaska agencies were involved in the first comprehensive surveys of oiled beaches, which took place in fall 1989 and were dubbed the Walkathon by DEC shoreline monitors.

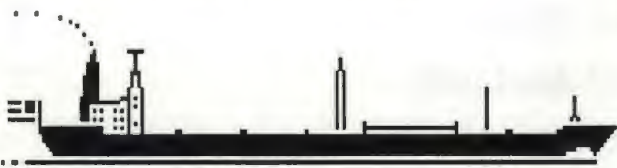
Training sessions for the surveyors are scheduled to begin April 22 in Anchorage.



Two New Publications on the Exxon Valdez Oil Spill

The Exxon Valdez Oil Spill and the National Park Service: A Report on the Initial Response, by William S. Hanable and Carol Burkhardt. 132 pages, bound. Copies may be obtained by writing Frank Norris, Publications Coordinator, National Park Service, Alaska Region, 2525 Gamble, Anchorage, AK 99503 or by calling 907/257-2685.

Out of the Channel: The Exxon Valdez Oil Spill in Prince William Sound, by John Keeble, published by Harper-Collins, 1990. Available at most book stores.



NOAA Survey, from Page 1
very weathered," she said.

Oil sheens were observed in the water at almost every site where the group dug trenches, Michel said.

A number of sites were surveyed during the January 1991 trip specifically to look for effects of a treatment method Exxon employed last year using small bulldozers or backhoes to move oiled sediment down into the tidal zone so it could be washed by waves and tidal action. Absorbent booms were spread on the water outside the treatment area to catch oil released into the water. Some state and federal agencies and conservation groups expressed concern last year that storm berm relocation would cause erosion of the beaches and release more oil into the water.

"At almost all the berm relocation sites the sediment has not returned to its original type, but the shape of the beach has returned," said Hayes. At a site in Northwest Bay on Eleanor Island, Michel reported that the berm relocation strategy had worked very well, and the upper part of the beach appeared to be clean. As long as the beach is exposed to enough wave energy, berm relocation appears to be an effective means of removing oil from the sediments, Michel said.

There are nine locations in Prince William Sound which federal and state agencies and Exxon have agreed not to clean up in order to study the effects of natural weathering processes on oil remaining in the environment. The survey group visited one of these "set-aside" locations in Herring Bay on Knight Island. Michel reported that the heavy oiling of 1989 has turned to a stiff surface coating and is flaking off like old paint. Though oil on the surface is being removed by storm action, a significant amount of subsurface oil remains at the site and very little changes were noted in overall oiling conditions, she said.

The sediment sample taken at that site contained almost liquid oil, and the oil-saturated sediments were showing no tendency to form pavement. "When you dig a trench oil droplets actually float on the water" which collects in the bottom of the trench, Michel said.

Updated Index to the Oil Spill Chronicle Available

An updated index to issues of the Oil Spill Chronicle from Vol. 1, No. 1, issued on July 11, 1989 through Vol. 3, No. 2 issued on February 15, 1991, is now available. To request the index or back copies of the newsletter, contact Kim Novosel, ADEC Exxon Valdez Oil Spill Response Center, 4241 B St., Suite 304, Anchorage, AK 99503, or call 907/563-1126.

The OIL SPILL CHRONICLE is published monthly by the Alaska Department of Environmental Conservation. Comments or inquiries should be addressed to: ADEC, Exxon Valdez Oil Spill Response Center, Attn: L.J. Evans, 4241 B Street, Suite 304, Anchorage, AK 99503. FAX: 907/563-1789. Phone 907/563-1126.

Upcoming Events: Exxon Valdez Oil Spill Response

- Feb. 18 - 21: Bioremediation workshops, Las Vegas
- Mar. 1: Final decisions on bioremediation for 1991
- Mar. 1: Exxon submits final May shoreline survey plan to Coast Guard for review and approval
- Mar. 3-7: International Oil Spill Conference, San Diego
- Mar. 7: Operations Steering Committee working group meeting, San Diego
- Apr. 7: Coast Guard response to Exxon's survey plan
- Apr. 23: Public Operations Steering Committee meeting in Anchorage, 5 PM (location to be announced)
- Apr. 26: May Shoreline Assessment Program begins
- May 15: Exxon submits 1991 cleanup plan to Coast Guard
- May 31: Coast Guard responds to Exxon's cleanup plan
- June 1: Commence 1991 cleanup operations

OIL SPILL CHRONICLE

State of Alaska

Department of Environmental Conservation

Exxon Valdez Oil Spill Response Center

4241 B Street, Suite 304

Anchorage, AK 99503



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ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL SPILL CHRONICLE

VOL 3, NO. 1

JANUARY 11, 1991

ANCHORAGE, ALASKA

Wildlife Still In Captivity

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Sea Otters

Little more than a week after the spill, six adult sea otters were sent to Sea World in San Diego for intensive care and laboratory evaluation. En route to San Diego, one of the six died, and within a few days four more had succumbed to liver damage resulting from ingestion of the crude oil.

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Today the four otter pups Robinett took back to Chicago are at home in a large pool, part of an informational display about sea otters and the effects of oil spills, said Ken Ramirez, assistant curator of marine mammals. One of the otters, "Chenik," was picked up as a tiny pup, unconscious and nearly dead. His life was saved through the efforts of the crew of the boat that found him, Ramirez said. Chenik continues to suffer complications from his ordeal, including occasional seizures.

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See Wildlife, Page 2

INSIDE:

Public comment period
extended, page 4
Oil Spill Conference, page 3
Wildlife papers available, page 2

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OIL SPILL CONFERENCE

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"The x-rays look O.K., but she can't fly any distance and we don't know why," said Lynn Vaught of ARRC. The group has tried cortisone injections and physical therapy, among other treatments, but have not seen much improvement.

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4241 B Street, Suite 304

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US Environmental Protection Agency

ATTN: Brian Ross

437 E Street, Ste. 301

Anchorage, AK 99501



OIL SPILL CHRONICLE

OIL SPILL PLAN RELEASED

JUNEAU -- The state's 1991 cleanup plan was released for public review on Nov. 26 as one of the final actions regarding the Exxon Valdez oil spill by outgoing Governor Steve Cowper.

The plan is designed to give all parties involved a clear understanding of what the state will require to complete the job, officials said. It will be followed up by site-specific work plans developed after the spring shoreline assessment, due to begin in May 1991.

"It's gratifying to finally have an end point in sight," Cowper said. "It's critical that Alaskans be the ones to determine that end point. Alaskans have lived with the spill and its effects on their resources, and their voices must be heard and heeded."

The document makes clear the state's intention to make independent judgments and, if necessary, require state-directed cleanup beyond what the Coast Guard orders. State and federal law give Alaska the authority to enact stricter standards for completion than those employed by the federal government, said Ernie Piper, State On Scene Coordinator.

The 1991 plan is designed as a set of instructions, including state policies, that will guide the development of an actual field operations plan for next spring and summer. The state uses a similar approach, on a smaller scale, in directing other spills, Piper said. Alaska Department of Environmental Conservation officials took the unusual step of putting the plan out to public review because of the size and scope of the Exxon Valdez spill, he said.

The plan includes a procedure for setting priorities for cleanup according to state resource uses, a list of approved cleanup

techniques and guidelines for their use, standards addressing the question--debated intensely in previous years-- "how clean is clean?", and describes shoreline assessment tasks to be delegated to response groups in communities affected by the spill.

"The hard decisions are going to come next year: how much oil to leave behind. This plan is a set of instructions on how to make those decisions according to the state's standards," Piper said.

Copies of the plan were sent to interested parties such as local governments, fishing

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organizations, tourism and recreational groups, private landowners, and subsistence users. Deadline for written comments is January 31, and a series of public meetings will be scheduled in Alaskan communities in January and February, 1991.

Copies are available from the Oil Spill Response Center at the Department of Environmental Conservation. Contact L.J. Evans, ADEC Oil Spill Public Information Officer, at 4241 B Street, Suite 304, Anchorage, AK 99503, or telephone 907/563-1126.

SUBSISTENCE REPORT SHOWS DECLINE IN HARVESTS

ANCHORAGE -- Residents of 15 native villages who live on foods harvested from the ocean lost confidence in their traditional subsistence foods following the Exxon Valdez oil spill of March 1989, according to a report released last week by the Alaska Department of Fish and Game.

More than 50 percent of the respondents directly attributed the March 1989 spill as the cause of the decline in subsistence food gathering that year. Fear of contamination of the food by oil was the most commonly cited reason, said Jim Fall of the Fish and Game Division of Subsistence.

In Prince William Sound, the area most directly affected by the spill, 88 percent of the households interviewed cited fear of contamination as the main reason for lower harvests. Other major reasons cited for the decline were time spent on oil spill cleanup - at least 18 percent of all the households - which kept the villagers from spending time on their normal food gathering tasks. And a number of respondents reported their perception that fewer animals were available for hunting because of spill induced mortalities.

"Levels of subsistence use do go up and down from year to year, but you wouldn't expect this level of decline in so many villages," said Fall. He presented a paper entitled *Subsistence After the Spill: Uses of Fish and Wildlife in Alaska Native Villages and the Exxon Valdez Oil Spill* at the annual meeting of the American Anthropological Association on Nov. 28.

More than 400 households in 15 communities were included in the study. Villagers participated from Tatitlek and Chenega Bay in Prince William Sound; English Bay and Port Graham along lower Cook Inlet; Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions in the Kodiak Island Borough; and Chignik, Chignik Lagoon, Chignik Lake, Ivanof Bay, and Perryville on the Alaska Peninsula. The subsistence division had conducted baseline research on subsistence in all of these communities in years prior to the grounding of the Exxon Valdez.

"We tried very hard to be sure there was village review. The study format was approved by representatives of every village council before the study began," Fall said.

Traditional subsistence foods for all of the communities in the study include a number of marine animals and plants. The largest volume of food is usually from the five species of salmon which thrive in the North Pacific: king, red, pink, chum and silver. In addition, depending on availability in their region, the villagers hunt for birds, marine mammals, deer, moose, or bear, catch other species of fish, and collect clams, mussels, other marine invertebrates, and marine plants such as kelp. Most residents of these villages depend on these natural sources for a large percentage of their diet, Fall said.

Though the overall study gathered information on other related topics, Fall's report focuses on the quantity and composition of subsistence harvests in the year after the spill, differences between 1989 and harvests in other years, and the reasons for the changes that occurred. Information on the other parts of the study will be released as a series of more lengthy and detailed reports which will be distributed by Fish and Game in coming months.

The relative decline in subsistence harvests in the year following the spill seemed to be related in part to the distance between the community and the source of the oil, Fall said. Communities that reported increases in harvests were the furthest away of all. In Prince William Sound, villagers reported harvests that were almost 59 percent lower in 1989 than their averages for previous years in the 1980's. The harvest in lower Cook Inlet communities declined by 48 percent in English Bay and 44 percent in Port Graham. Every Kodiak community also reported lower harvests in 1989, ranging from 78 percent lower in Ouzinkie to 20 percent lower at Akhiok. On the Alaska Peninsula, small declines in harvests occurred in two villages, Chignik Lagoon - ten percent lower, and Perryville -

See **SUBSISTENCE**, Page 3

STATE SAYS HALF THE BEACHES ARE DONE

ANCHORAGE -- The State of Alaska last week released a report which says that more than half of the beaches in Prince William Sound and the Kenai Peninsula oiled by the Exxon Valdez oil spill are as good as human activity can make them and no further reassessment is necessary.

The Prince William Sound and Kenai Shoreline Status Report compiles information from surveys of oiled beaches collected from 1989 through October 1990 by state workers and teams from communities affected by the nearly 11 million gallon crude oil spill, which occurred on March 24, 1989. Beaches deemed cleaned to the state's satisfaction do not need to be reassessed next spring when Exxon returns to continue the cleanup, said John Bauer of the Alaska Department of Environmental Conservation Oil Spill Response Center.

"At some point we're going to have to say we've done all we can, even though there's still oil left at some of these areas."

*John Bauer
DEC*

"At some point we're going to have to say we've done all we can, even though there's still oil left at some of these areas. Let's focus our energies on the beaches that are still heavily oiled out there and clean those to the same level," said John Bauer of DEC.

The "d e m o b" or demobilization report states that 404 shoreline segments in the Sound and the upper Gulf of Alaska need no

further treatment. While some oil remains at many of those sites, state officials said that crews have done all that is technically and environmentally possible. Survey teams will still be asked to reevaluate 353 segments in the same areas next spring, Bauer said.

"We have to be honest with ourselves," Governor Cowper said. "The state, the Coast Guard and Exxon have made substantial progress throughout the spill area. Many areas are free of oil. However, there are limits to what we can and should do. In this last season it's important for us to focus our efforts, do the best we can at the remaining sites, and move on."

Exxon will develop specific workplans for Coast Guard approval to address oiling at the remaining sites after the spring shoreline assessment, due to begin in May 1991.

SUBSISTENCE, from page 1

four percent lower. This region also contained the only communities which reported increases in subsistence harvests during 1989, Chignik at four percent higher, 20 percent higher in Ivanof Bay, and Chignik Lake, 50 percent higher.

Analysis of the results is not complete, so the subsistence division can't say for sure yet why these differences occurred, Fall said.

"In part, I think it may have to do with the observations of oil by people out on the beaches during cleanup or subsistence activities, or commercial fishing. The people in Prince William Sound saw the worst of the spill. English Bay and Port Graham residents saw lots of oil in Windy Bay and other places. In Chignik Bay there was

certainly oil present. People did hear about the problems, they did observe some tar balls and other things, but it was more scattered, it was not the same kind of situation (as Prince William Sound). They didn't see as many dead oiled birds or sea otters or things like that."

The survey was conducted as part of the division's regular program of information gathering on subsistence uses of wildlife resources which is required by state law, Fall said.

The subsistence division also participated in another project with the National Oceanic and Atmospheric Administration and Exxon to perform an extensive series of analytical chemical tests of foods collected

See **SUBSISTENCE**, Page 4

SUBSISTENCE, from Page 3

in areas identified as traditional by the villagers. Based on these studies, the state's section of Epidemiology issued a health bulletin on Sept. 22, 1989 which states in part that:

"Results of studies to date, combined with available scientific knowledge, provide powerful evidence that Alaskan finfish are and will continue to be safe to eat."

The bulletin also reported that crabs, clams, and mussels collected on heavily-oiled beaches showed high levels of aromatic hydrocarbons and should not be eaten. Representatives of state and federal agencies, native organizations and Exxon travelled to the villages to discuss with the villagers what was safe to eat and what was not, but into the second year of the spill the villagers continued to have doubts about the safety of the foods.

"I don't want to eat off the beach since I seen all the oil," one respondent from Chenega Bay reported in April, 1990.

"The oil spill screwed everything up and people were scared to eat anything out of the ocean," a villager from Ouzinkie said in January, 1990.

"Responding with caution after observing such signs (of oil) is culturally appropriate in communities of hunters and fishermen, where careful observation of the environment is a basis of survival," Fall said.

"The oil was something new that the villager's previous experience could not explain. A full recovery from the spill is unlikely until people can once again place confidence in their own abilities to interpret and understand their environment."

PUBLIC BRIEFING SCHEDULED

The Exxon Valdez Oil Spill Operations Steering Committee meeting scheduled to take place in Juneau on Dec. 11 is a work session with the U.S. Coast Guard, Exxon, and Alaska Department of Environmental Conservation representatives. A public briefing will be held in Anchorage on Dec. 13 at 10:00 AM at the ADEC Oil Spill Response Center, 4241 B Street, Suite 204. For more information, call L.J. Evans, 907/563-1126.

OIL SPILL CHRONICLE

State of Alaska
Department of Environmental Conservation
Oil Spill Response Center
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