Alaska Department of Environmental Conservation

Spill Prevention and Response Division

Prevention and Emergency Response Program

10-YEAR RETROSPECTIVE

1 July 1995 to 30 June 2005

Prevention—Preparedness—Response

10-Year Retrospective

This retrospective presents a summary of the highlights and accomplishments of the Prevention and Emergency Response Program over the ten-year period from July 1, 1995 to June 30, 2005. The report is organized into the following sections:

INTRODUCTION
Development of the Prevention and Emergency Response Program

- Alaska Department of Environmental Conservation
  - Commissioner Kurt Fredriksson
- Spill Prevention and Response Division
  - Director Larry Dietrick
- Prevention and Emergency Response Program
  - Program Manager Leslie Pearson

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- Division of Spill Prevention and Response
- Prevention and Emergency Response Program
  - Organization and Mission

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- Spills Database
- PERP Process for Documenting Lessons Learned from Major Spills and Drills
- Home Heating Oil Initiative
- Fishing Vessel Initiative

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- Environmental Sensitivity Index Mapping
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RESPONSE

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- Check Valve 92
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- Juneau Truck Rollover
- Crab Bay Bunker Barge
- New Port Walter

Northern Area Response Team (NART)

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- D-Pad Flowline
- Milepost 215 Truck Rollover
- U Pad Acid
- TAPS 400
- BPXA A Pad Well 22 Explosion
- Denali Fault 7.9 Earthquake
- Drill Site 2H Produced Water

Alaska Department of Environmental Conservation

"Before the Exxon Valdez oil spill, the Division of Spill Prevention and Response did not exist. Today, fifteen years after the Division was created, Alaska has the best oil and hazardous substance spill prevention and response system in the country if not the world. As noted in this 10-year retrospective, the accomplishments of the Division's Prevention and Emergency Response Program are significant and far reaching. Alaskans are united in demanding that state government never allow a tragedy like the Exxon Valdez oil spill to happen again. I'm proud of the program's hard work, professional spirit, and dedication over the years to achieve the public's high expectations. Program staff should be equally proud of the commitment they make each day to protect Alaska's people and environment from spills that most often occur at the worst time and under the most difficult circumstances that Alaska's weather and terrain can dish out. Congratulations on a job well done!"

Kurt Fredriksson, Commissioner
Alaska Department of Environmental Conservation

"The Division of Spill Prevention and Response has made huge strides since the division was reorganized in 1995. Our contingency plan reviews, spill response and contaminated sites cleanup is now carried out by a highly talented group of professionals. Our staff are recognized as experts in the field. The cooperation and teamwork between programs is exceptional. The Prevention and Emergency Response Program has done an outstanding job in developing a response capability that is world class. I know when a spill occurs, the response staff take the necessary actions to ensure the spill is efficiently and effectively cleaned up in the shortest time possible to protect our valuable resources."

Larry Dietrick, Director
Spill Prevention and Response Division

"During the past decade, response personnel have coordinated and managed a myriad of oil and hazardous substance spills. Over 24,000 spills have been reported and 3,500 field responses conducted throughout the state. The art to spill response involves evaluating the risk and incident complexity, which drives the level and degree of response actions. Spill incidents can range from neighbor complaints, vessel groundings, tanker truck rollovers, railroad derailments, pipeline release, overfill of fuel tanks, and the list goes on. We try to mitigate the consequences of someone else's decision or mishap. Our response program continues to mature and evolve through the 'lessons learned' process. DEC responders are innovative and creative. They are dedicated professionals capable of adapting to any situation. We manage incident stress by humor. We're a proud, yet humble 'family' with a keen sense of commitment to protecting the public and environment."

Leslie Pearson, Program Manager
Prevention and Emergency Response Program

	Total Number of PERP staff	Average Age of PERP staff	Average Years of Spill Response Experience	Total Years of Spill Response Experience
FY 1996	30	42.3	8.6	257
FY 2005	34	48.4	12.6	427

Division of Spill Prevention and Response

The improper handling of oil and hazardous substances can pose a significant threat to Alaska's environment, citizens, and economy. The state's social and economic history has changed with oil development and the expanding chemical use after the discovery and development of the oil and gas fields on the Kenai Peninsula and in Cook Inlet, and later at Prudhoe Bay.

The mission of the Division of Spill Prevention and Response (SPAR) is to prevent, respond and ensure the cleanup of unauthorized discharges of oil and hazardous substances. SPAR is responsible for protecting Alaska's land, waters, and air from oil and hazardous substance spills. SPAR has played a significant role in the progress that has been made in the safe handling, storage and transportation of oil and chemicals and the cleanup of historic contamination. The risk of spills will never totally be eliminated, but SPAR seeks to continually learn how to better manage that risk.

Four programs within SPAR are responsible for ensuring that spill prevention and proper response actions occur. These programs work together to pursue SPAR's mission and response objectives.

- **The Prevention and Emergency Response Program** (PERP) responds to spills to ensure cleanup measures are implemented, as soon as possible, and institutes a statewide spill prevention program. PERP staff are the state's emergency responders to oil and hazardous substance spills.

- **The Industry Preparedness Program** (IPP) requires regulated facilities and vessels to develop state-approved contingency plans to establish a facility-wide spill prevention program and to ensure personnel, equipment, and financial resources are available to respond to spills. These plans are utilized by emergency responders in the event of a spill.

- **The Contaminated Sites Program** (CSP) ensures responsible parties clean up sites contaminated by past improper disposal of oil and hazardous substances. CSP staff provide oversight of long-term cleanup projects, especially those that require prolonged and innovative techniques for site remediation.

- **Response Fund Administration** (RFA) manages the Oil and Hazardous Substance Release Prevention and Response Fund as a viable, long-term funding source for the State's core spill prevention and response programs. The program manages the Prevention and Response Accounts of the Fund, including the recovery of State costs for responding to spills from the responsible party or from other sources of funding if recovery from the responsible party is not possible.

PERP MISSION

Protect public safety, public health and the environment by preventing and mitigating the effects of oil and hazardous substance releases and ensuring their cleanup through government planning and rapid response.

In 1995, ADEC underwent a complete structural reorganization that included the Division of Spill Prevention and Response. Within this division, the Prevention and Emergency Response Program was created on June 1, 1995. PERP is responsible for all ADEC emergency response activities related to oil and hazardous substance releases statewide. Response activities are organized into three Response Team Areas, each with a designated State On-Scene Coordinator (SOSC) responsible for management of spill response activities within that area. The Northern, Central, and Southeast Alaska Response Teams are supported by two additional sections within the program, Prevention and Preparedness. Resources from all sections are combined into a single statewide team for large incidents.

The overall objectives for the program are:

Prevention: Promote oil and hazardous substance spill prevention.

- Prevent or reduce oil spills and hazardous substance releases from unregulated sources through education and technical assistance to industry and the public.
- Identify and initiate new spill prevention initiatives based on spills data analysis and trend identification.

Preparedness: Being prepared to respond to oil and hazardous substance spills.

- Improve overall statewide spill response preparedness.
- Update and improve statewide and regional spill response plans.
- Enhance the statewide hazardous materials response capability through meetings, drills and coordinated training, as well as improving local community preparedness.
- Conduct joint training and response exercises.
- Develop and maintain response tools, common software and standardized terminology among response agencies.
- Improve statewide staff mobilization and logistical support functions to ensure prompt and effective state response.

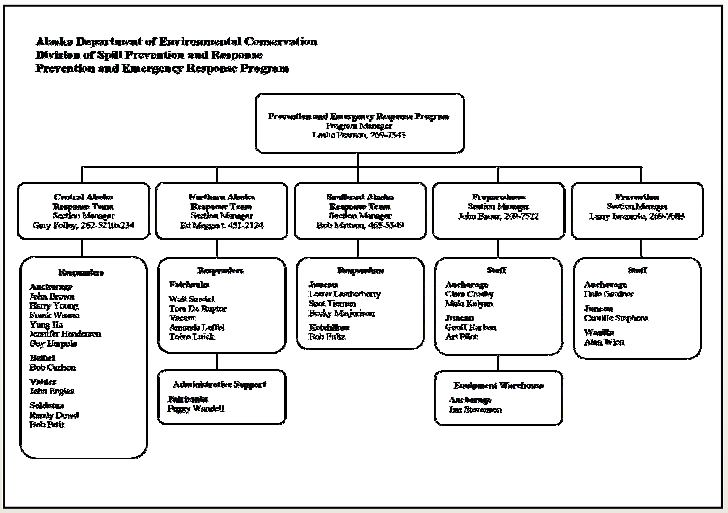
Response: Ensure that oil and hazardous substance spills are cleaned up.

- Rapidly respond to protect public health and welfare, environment, and natural and cultural resources from the direct or indirect effects of oil and hazardous substance releases.
- Ensure a prompt and adequate cleanup of spills by the responsible parties.
- Apply consistent and measurable cleanup standards.
- Ensure the safety of responders and the public from the effects of the spill incidents.
- Assess and participate in State-led or State-augmented spill responses.
- Assess damages to the environment and ensure natural resources are restored to a safe, healthy, and economically usable state.

PREVENTION AND EMERGENCY RESPONSE PROGRAM

PERP ORGANIZATION

As noted previously, PERP has been organized since 1995 into five Sections: the Preparedness Section, the Prevention Section, and the three area response teams—Central Area Response Team (CART), Northern Area Response Team (NART), and Southeast Area Response Team (SART). PERP staff numbers have averaged between 30 – 35 employees over the ten-year period of this report. At the end of June 2005, PERP staff averaged 48.4 years old and had 12.5 years of spill response experience.



Response Team Boundaries

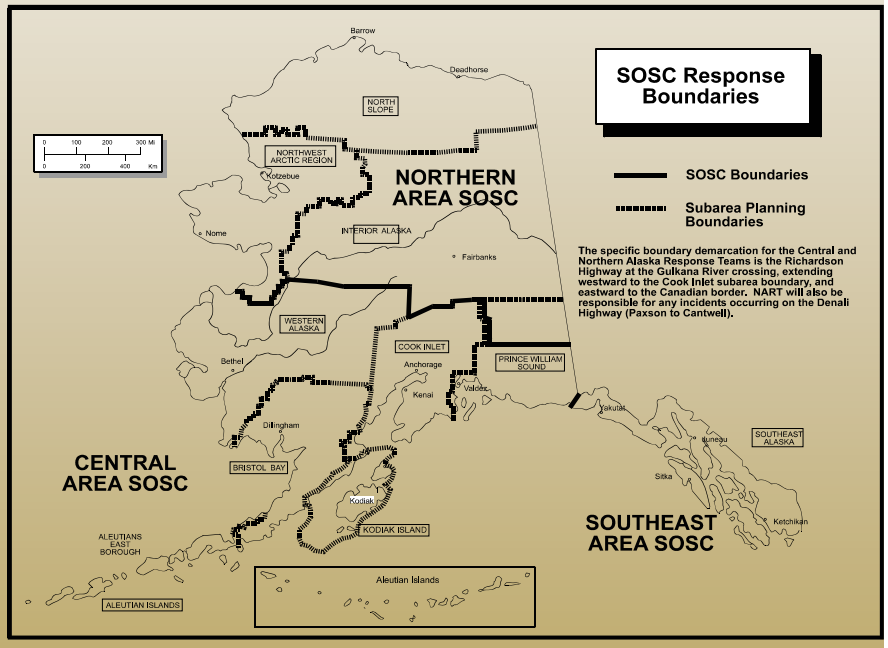
The boundaries for the three response teams provide the geographic limits for normal day-to-day PERP operations and responses to small oil and hazardous substance releases and incidents. The designated SOSC for each of these teams manages the response activities within their respective areas.

Mutual Response Support

There is a mutual support relationship between the three area response teams. In the event an incident overtaxes resources of a single area, the established response boundaries do not apply. In such a situation, the entire PERP staff in Juneau, Anchorage, Fairbanks, Kenai, Bethel, Ketchikan, and Valdez are subject to mobilization as the State Response Team.

Meeting the Program's Mission

Although PERP is organized based upon its mission to meet the objectives of Prevention, Preparedness, and Response, these three elements are fundamental and pervasive throughout the tasks performed by staff no matter where they are assigned.




T/V Exxon Valdez Oil Spill

SPILLS DATABASE

The PERP statewide spills database (SPILLS) electronically manages information about oil and hazardous substance releases reported to the Department. Spill data is used for the following:

- program management;
- budgeting and performance measures;
- spill prevention;
- spill planning; and
- responding to public information requests.

HISTORY

In 1991, a conceptual statewide spills database was proposed and implemented by the former Northern Regional Office in Fairbanks. In March 1993, programming staff in Juneau began a statewide design effort using this spills database as a working model.

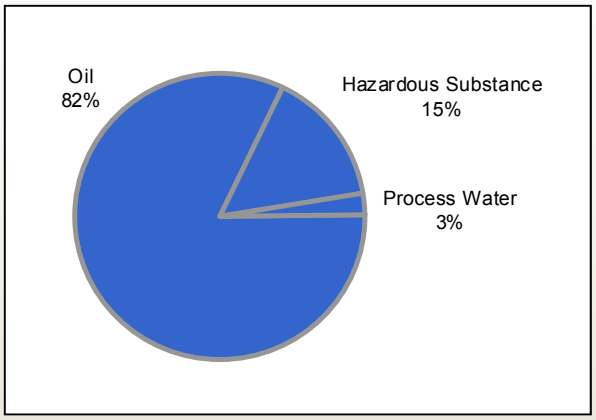
After nearly two years of design and development, this statewide spills database (SPILLS) went into production on July 1, 1995. Programmers used RBase and DOS for the original application.

By 2001, ADEC had largely migrated to the newer Windows operating system. Incompatibilities with newer operating systems and a desire to improve the database by taking advantage of newer technology led to the decision to redevelop SPILLS as a web application that used Internet Explorer as the user interface (the "front-end") and SQL Server for the database (the "backend"). The new SPILLS application went into production in September 2001.

DATA

On average, more than 2,000 records are entered into the database each fiscal year. As of June 30, 2005–10 years after going into production–SPILLS contained more than 24,000 records. This 10-year record provides a basis for evaluating spill trends, gauging the success of our regulatory programs and identifying the need for new or strengthened prevention measures.

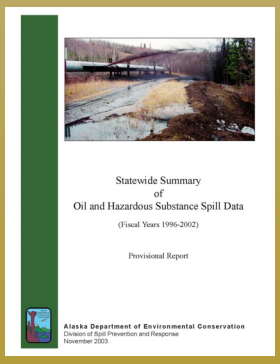
PERP staff compiled a data summary for the period 1996-2001 (7 years) and a 10-year data summary has been drafted.

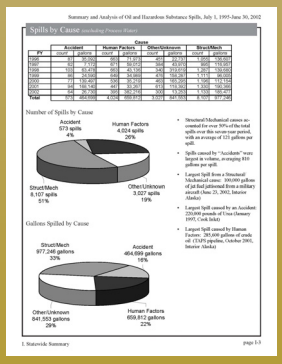


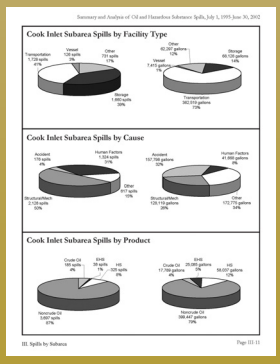
Number of Spills by Product

Number of Reported Spills (June 1996 – July 2005)

- Alaska averages 2,304 spills each year.
- Petroleum (both crude and non-crude oil products) constituted the vast majority (82%) of the reported spills.
- An average of 351 hazardous substance spills occurred per year, with an average spill volume per incident of 397 gallons. In the past five years, the number of hazardous substance spills has increased by 14% compared to the previous five-year period. The total volume decreased by 58% during the same period.
- An average of 59 process water spills per year occurred with an average spill volume per incident of 2,935 gallons. In the past five years, the number of process water spills has increased by 31% compared to the previous five-year period. The total volume released decreased 58% during the same period.



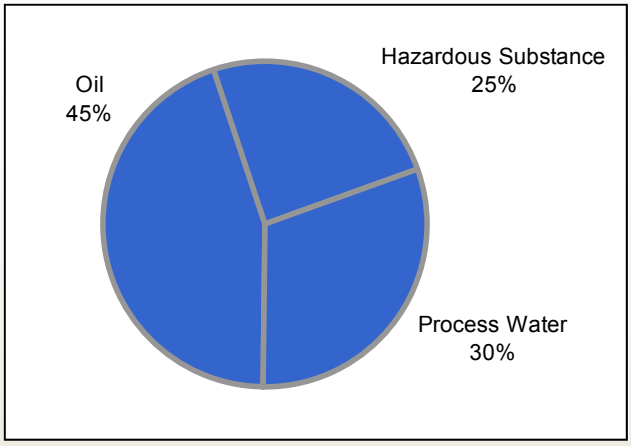




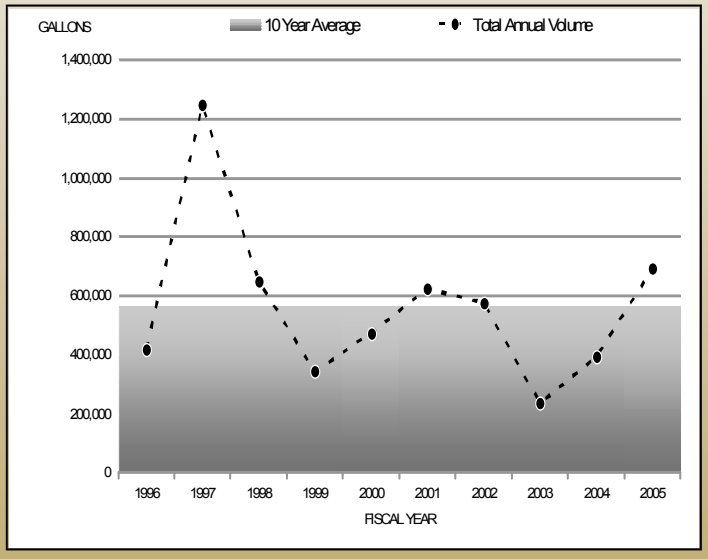
SPILLS DATABASE, CONTINUED

Volume Released (June 1996—July 2005)

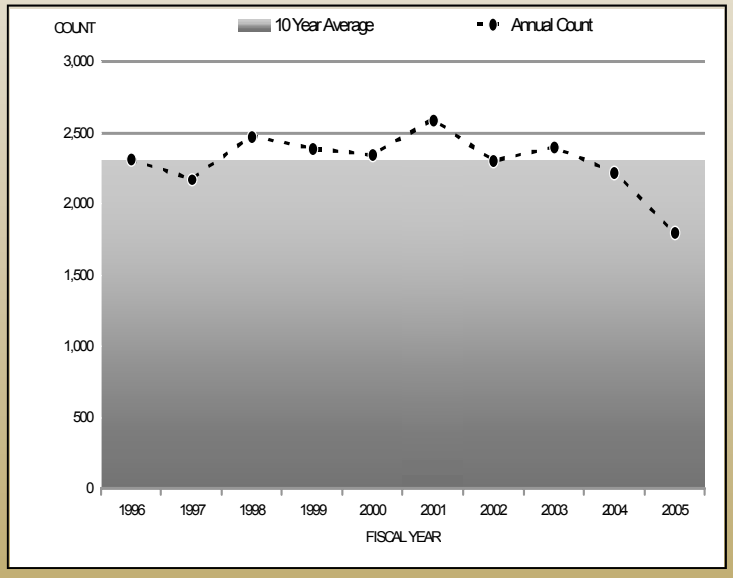
- A total of 5.7 million gallons of oil, hazardous substances and process water were released during the 10-year period.
- Oil accounted for 45% of the total volume released, and the average spill volume for the reported oil spills was 135 gallons.
- While process water spill reports made up only 3% of the total spill reports received, these spills accounted for 30% of the total volume released. Process water spills often involve a significantly higher volume than oil or hazardous substance releases. The spill volume for process water incidents averaged 2,934 gallons. The total includes a major process water spill of 994,000 gallons on the North Slope in 1997.
- There were no significant trends in the total volume released over the ten-year period.



Volume Released by Product



Volume Released by Fiscal Year Compared to 10-Year Average



Number of Spills by Fiscal Year Compared to 10-Year Average

"The spills database helped PERP analyze spill risks and better manage our staff workload. The database has been used to analyze spill trends in terms of location, size, cause, and source. Database reports have been used as supporting documentation for new prevention measures such as the non-tank vessel legislation and home heating oil spill prevention initiative. SOSCs use my reports to monitor workloads, and I use the data to populate the web site. It has been a great tool for the program."

PERP Database Manager, Camille Stephens

PERP'S LESSONS LEARNED PROCESS

BACKGROUND

PERP staff serve as the primary spill response cadre for the department. In this capacity, PERP staff are responsible for coordinating overall State spill response efforts during actual spill events, as well as during major drills sponsored by industry and other federal, State and local agencies.

PURPOSE

In order to capitalize on the training and experience gained from significant responses and major drills, PERP staff are responsible for compiling the lessons learned from drills and significant spills. An internal DEC lessons learned report is normally prepared following each major drill or significant spill event. These internal reports are analyzed to determine common recurring deficiencies as well as identifying significant gaps in the State's capability to respond to a major oil or hazardous substance release. External lessons learned reports are also generated jointly by industry, federal and State agencies, and other entities involved in the event.

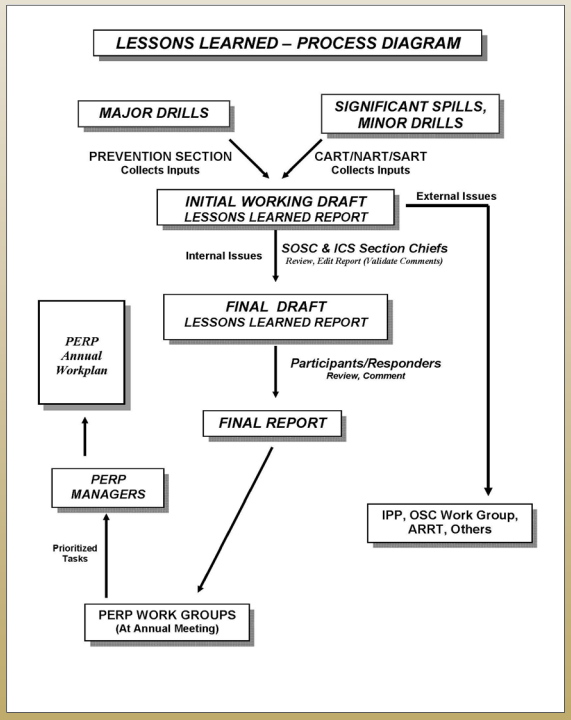
Since the formation of PERP in July 1995, the lessons learned process has been applied to numerous incidents and drills. These lessons learned are frequently re-applied during the planning and preparation process for a major drill, and also during the emergency response phase of a significant incident. As an example, during the *M/V Selendang Ayu* incident in December 2004, the lessons learned from the *M/V Kuroshima* incident (November 1997) were disseminated to PERP responders.

Some of the more noteworthy improvements resulting from lessons learned reports include:

- Standard activation of the Unified Command website for significant events
- Immediate liaison with local community/tribal leaders during a major incident within their jurisdiction
- Streamlined and improved implementation of the Incident Command System
- Improvements in the Unified and subarea plans
- Implementation of the Regional Stakeholder Committee concept
- Improvements in PERP's ability to deal with media

Areas of "work in progress" include:

- Natural Resource Damage Assessment processes and sampling procedures
- Potential Places of Refuge (PPOR) decision-making documentation
- Updates to Alaska Regional Response Team dispersant use guidelines
- Integration and operation within Command Centers
- Facilitating the use of an industry's spill response equipment for mutual aid purposes without compromising that industry's statutory obligations.



"PERP's participation in drills and actual spill events and the subsequent documentation of key lessons learned have certainly improved our overall response capability. A weakness consistently identified in 1995 was the inexperienced implementation of the incident command system during its early application in drills and responses. Over the past 10 years, PERP staff have become very knowledgeable of ICS procedures and are now capable of integrating and functioning smoothly as part of an established incident management team. Training and equipment enhancements are also a direct result of lessons learned from drills and actual spill events."

PERP Prevention Section Manager, Larry Iwamoto

PERP'S RESEARCH AND DEVELOPMENT PROGRAM

BACKGROUND

As a result of judgments entered in the criminal cases for the Exxon Valdez oil spill, funds were appropriated for use by the State of Alaska to enhance the spill response capabilities within the State. A total of $2,500,000 was made available to the ADEC for projects under this program. The funds were used for research programs directed toward the prevention, containment, cleanup and amelioration of oil spills in Alaska. In cooperation with other stakeholders, ADEC developed a list of over thirty research and development projects dealing with such subjects as cleanup technology, non-mechanical response techniques, the fate and effects of spilled oil, oil spill contingency planning and preparedness, spill response training, incident management systems and spill prevention. Research has been conducted by Alaska oil spill response cooperatives, private consultants, universities, and other State and federal agencies.

GOALS AND OBJECTIVES

The following were among the goals and objectives that guided ADEC in the development of specific research and development projects under this program:

- Projects supported the goal of better protection of the State of Alaska's public health, welfare and environment from the effects of oil spills.
- Projects provided the opportunity to develop practical solutions to problems associated with oil exploration, production, transportation and storage in Alaska.
- Projects complemented and built upon past and present research in the specific area of study or activity.
- Cooperative projects that took advantage of other funding sources to leverage ADEC funds were encouraged whenever possible.

PROJECT DEVELOPMENT AND COORDINATION

ADEC has worked with its Alaska stakeholders and other key players to identify and develop projects that were of the greatest benefit to all Alaskans. Research has been conducted in cooperation with the Cook Inlet and Prince William Sound Regional Citizens' Advisory Councils, industry spill-response cooperatives and other State and federal agencies, including Environment Canada, the U.S. Minerals Management Service, the National Oceanic and Atmospheric Administration, the University of Alaska, and Prince William Sound Community College. Private consultants from throughout the United States, Canada, and the United Kingdom have also been involved in the projects.

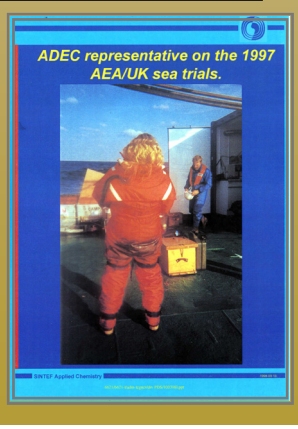
All projects, whether completed, in progress, or proposed for inclusion in ADEC's research and development program, fell into these categories:

- Containment and Cleanup
- Non-Mechanical Response Techniques
- Fate and Effects
- Contingency Planning and Preparedness
- Training and Spill Management Systems
- Spill Prevention

The final project reports are available on line at http://www.dec.state.ak.us/spar/perp/r_d/research_list.htm#prev.

"The Exxon Valdez judgment provided ADEC with a unique opportunity to institute a program of practical, applied research into spill prevention, preparedness and cleanup, and to partner with other State, federal and private stakeholders to further our knowledge of these topics. The research conducted, and partnerships forged, continue to provide benefits to Alaska's spill response community."

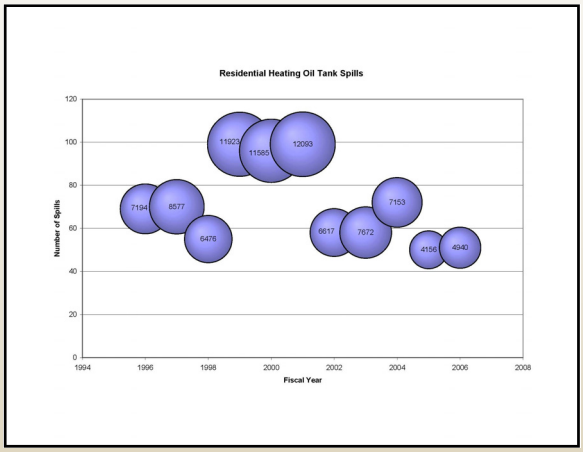
PERP Preparedness Section Manager (1995– 2000),
Ed Collazzi



HOME HEATING OIL INITIATIVE

BACKGROUND

Home heating oil tanks (HHOTs) are not regulated in Alaska. Through the 1990s, the Department focused most attention on regulated facilities, including commercial fuel storage tanks. By the end of the decade, the Prevention and Emergency Response Program began to take a serious look at the impact of spills from unregulated sources. Heating oil, ubiquitous throughout the state, was an obvious candidate for closer scrutiny.



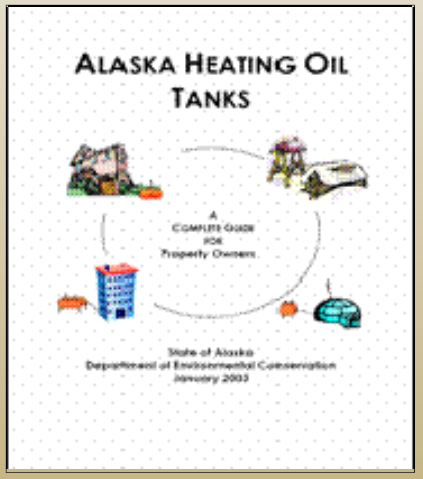
The graph above presents the number of spills from HHOTs by fiscal year. The size of the bubble is representative of the volume of oil spilled.

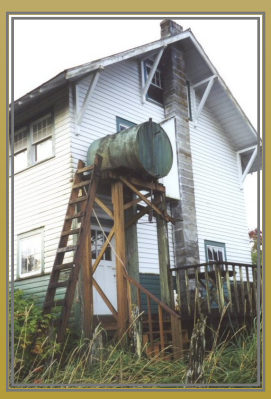
In 1999, under the direction of the SOSC of the NART in Fairbanks, staff completed a report outlining the known and potential magnitude of the problem related to oil spills from residential heating oil tanks. This report, from a study of census data and four years of spill data, estimated that the number of HHOTs in the state rose from 72,104 in 1990 to 80,234 in 1999. Additionally, the report found that 8.5% of the reported diesel spills in Alaska were from HHOTs. The report stated that it was likely that these numbers represented only a small fraction of the actual HHOT spills that occurred in Alaska each year. Further, the report determined that the bulk of these spills were preventable.

PROJECT OVERVIEW

In 2001, PERP formed a workgroup to address the problems identified by the NART study. The work group proposed the Home Heating Oil Initiative. The initiative's purpose was to achieve a reduction in the number and magnitude of heating oil discharges from home heating oil systems through a variety of public outreach methods with a focus on prevention targeted primarily at the homeowner. The workgroup decided that an education program would be the most effective means of reaching the public and reduce the number of HHOT spills in Alaska.

The workgroup conducted a web search to determine if other states had home heating oil programs and how these might be adopted for use in Alaska. A website for HHOT information was created. The workgroup developed a home heating oil information manual in conjunction with the Contaminated Sites Program, and three brochures were created as part of the education program and placed on the website. Workgroup members have attended home shows, state fairs, and local and statewide forums, and have been interviewed on radio and television. A series of public service announcements was produced and aired in over 250 Alaskan communities on National Public Radio in 2003 and 2004, and a print version appeared in newspapers.





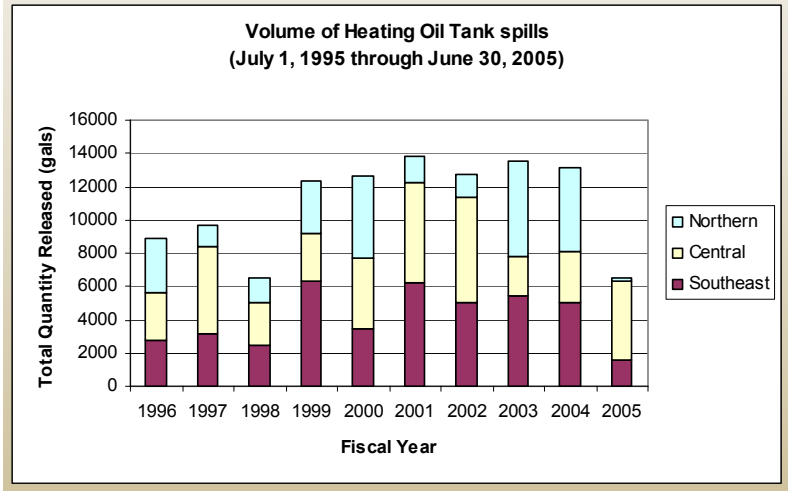
HOME HEATING OIL INITIATIVE, CONTINUED

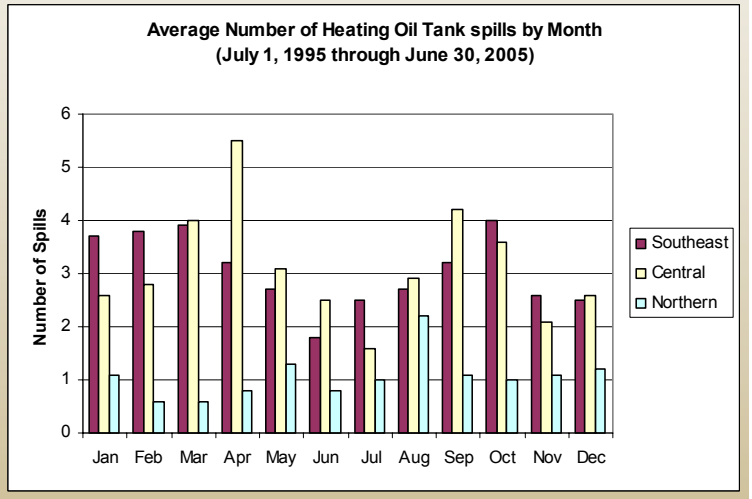
Since the inception of the initiative, the trend has been an overall decrease in both number and volume of reported heating oil spills, with a significant drop between 2004 and 2005. Whether or not this drop is an anomaly or will be reflected in 2006 spill numbers remains to be seen.

FUTURE GOALS

PERP continues to develop outreach and educational projects designed to increase the public's awareness of the negative effects of home heating oil tank spills and the prevention measures they can take.

Additional outreach information is being developed for fuel distributors. Greater emphasis is being placed on providing information on preventive measures to rural Alaskan communities where oil drum "tanks" are common and the high price of oil makes the impact of a spill difficult on the residents and governments of these remote Alaskan villages and towns.





The tables provided show annual numbers of reported spills from heating oil tanks and average annual volume of heating oil spilled both cumulative and by geographic regions. Source: Prevention and Emergency Response Program Spills Database.

FISHING VESSEL INITIATIVE

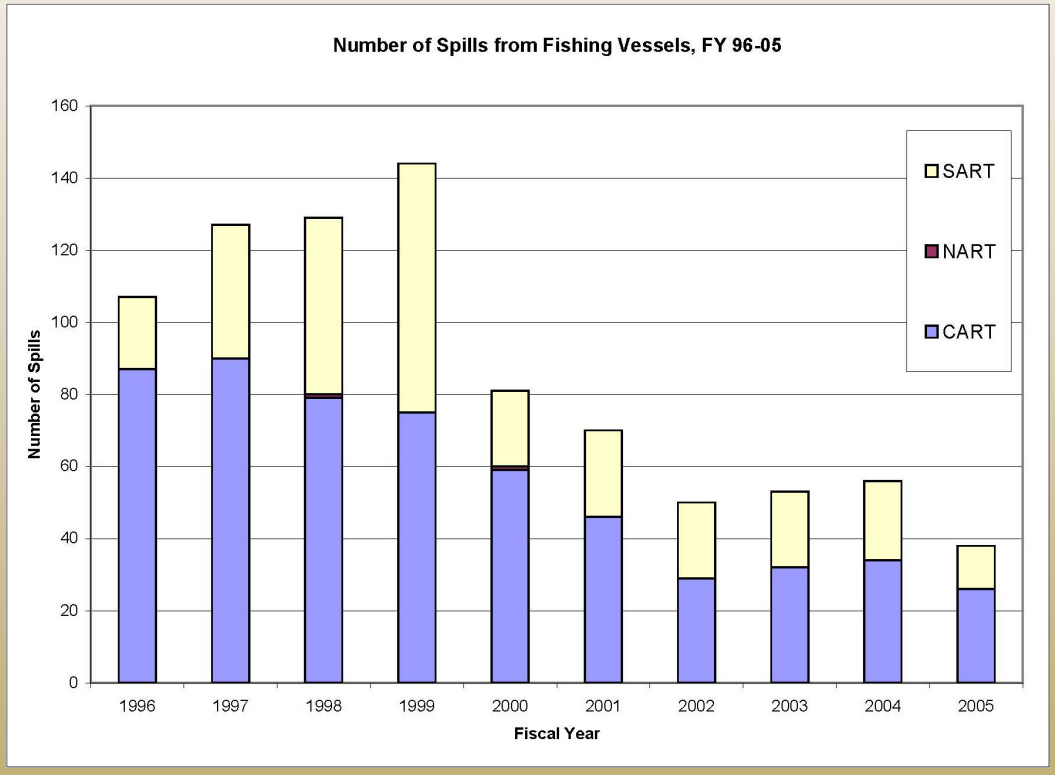
OVERVIEW

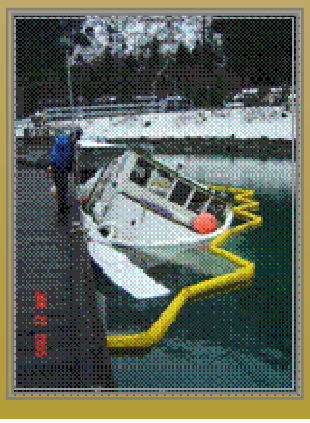
The Fishing Vessel Spill Prevention Initiative seeks to develop recommendations and a strategy that can reduce the number of oil spills from fishing vessels in the State of Alaska. A PERP workgroup was established to formulate strategies and develop a timeline. The group has reviewed existing databases and reports from the U.S. Coast Guard, ADEC, and the Alaska Department of Fish and Game - Commercial Fisheries.

The Initiative workgroup will continue to research similar efforts developed within other U.S. coastal states and individual harbors within Alaska and other states.

Some spill-reduction options under consideration include:

- Sunk-at-Dock response packages that include pre-staged containment boom and pumps at regional hubs;
- Nearshore spill response recovery packages;
- Pre-staged boat harbor spill response equipment; and
- Educating mariners on risks and consequences.





UNIFIED AND SUBAREA CONTINGENCY PLANS

BACKGROUND

Congress passed the Oil Pollution Act (OPA) of 1990 in the wake of the Exxon Valdez oil spill, which occurred in March of 1989. The statute establishes liability for damages resulting from oil pollution and establishes a fund for the payment of compensation for such damages. This trust fund, financed by a tax on oil (presently suspended), is available to clean up spills when the responsible party is incapable or unwilling to do so. OPA requires oil storage facilities and vessels to submit to the federal government spill prevention and response plans detailing how they will respond to product discharges and to take responsibility to clean up any spills that may occur.

The law streamlined and strengthened the U.S. Coast Guard (USCG) and the U.S. Environmental Protection Agency's (EPA) ability to prevent and respond to catastrophic oil spills. OPA amended the Clean Water Act and, in conjunction with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), it mandated a *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)* to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants. OPA called for the establishment of Regional Response Teams to oversee spill response planning and protocols and Regional Citizen Advisory Councils (RCAC) to monitor the oil shipping industry in Cook Inlet and Prince William Sound.

SPILL PLANNING

OPA requires the USCG and the EPA to prepare oil spill response plans for the State of Alaska, which is designated as an entire planning region under federal guidelines. An Alaska statute, also passed as a result of the Exxon Valdez oil spill, requires the ADEC to prepare a statewide master plan addressing oil and hazardous substance discharges. In late 1993, the State Emergency Response Commission and the Alaska Regional Response Team approved the concept of combining federal and state planning requirements and developing joint plans. The *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases*, more commonly known as the Unified Plan, meets these federal (NCP and OPA) requirements for regional and area planning, as well as state planning requirements. The Unified Plan, along with the supplementary Subarea Contingency Plans, represents a coordinated and cooperative effort by government agencies and was written jointly by the USCG, the EPA, and the ADEC.

Alaska statute divides the state into ten regions for oil and hazardous substance spill planning and preparedness. The USCG and the EPA joined with the ADEC to use these ten regions for area planning instead of the federal planning divisions since this would facilitate unified planning for the State of Alaska and prove more practical as well. Because the State of Alaska is called a planning "region" under federal planning guidelines and to avoid confusion with the other federal term, "area contingency plans," these ten subordinate planning regions of the state are called "subareas" in the context of the Unified Plan.

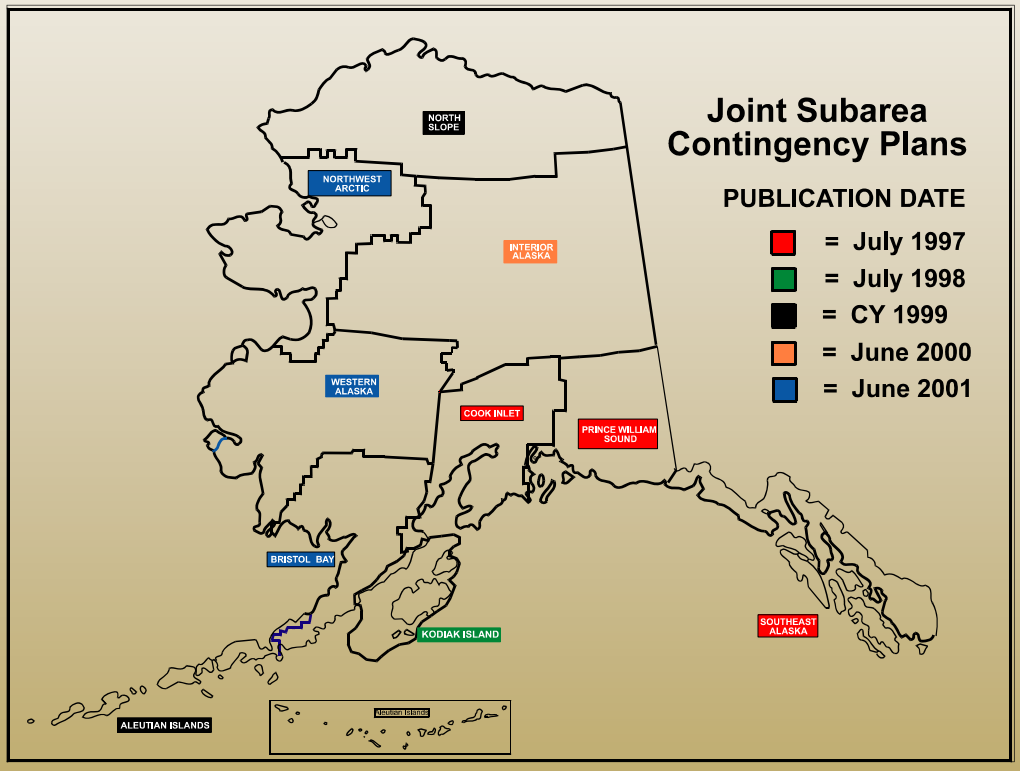
The Unified Plan contains information applicable to pollution response within the entire State of Alaska and meets the pollution response contingency planning requirements applicable to the federal and State governments. The plan provides broad policy guidance and describes the strategy for a coordinated federal, state and local response to a discharge, or substantial threat of discharge, of oil and/or a release of a hazardous substance within the boundaries of Alaska and its surrounding waters.

UNIFIED AND SUBAREA CONTINGENCY PLANS, CONTINUED

Under both federal and State law, the responsible party for an oil or hazardous substance incident is required to report the incident and mount a response effort to contain and cleanup the release. The federal and State governments mandate response plans for oil tank vessels and facilities that have stringent spill response requirements. If the responsible party fails to respond adequately or if no responsible party can be identified, then the federal and State governments will mount a response and will rely upon the Unified Plan and the appropriate Subarea Contingency Plan for response protocols and guidance.

Whereas the Unified Plan contains general information for response efforts taking place anywhere in the State of Alaska, the Subarea Contingency Plan (SCP) concentrates on issues and provisions specific to its particular subarea. The SCP provides information precise to the area, including emergency response phone numbers, available response equipment and other resources, specific response guidelines, and information sensitive areas protection and on hazardous substance presence.

Alaska State statute mandates a public review of all new plans, an annual ADEC review of these plans, and another public review whenever the plans are significantly revised. The federal government does not require public review for its plans, though the USCG and the EPA, as part of the Alaska unified planning process, do cooperate with the State of Alaska and participate in the public review process.



PREPAREDNESS

A brief synopsis of the Unified Plan and the Subarea Contingency Plans follow, along with a timeline.

UNIFIED PLAN SYNOPSIS

Annex A provides the purpose and objectives; existing government contingency planning requirements; federal and State authorities; geographic planning and response boundaries; and the response systems and policies
Annex B explains the unified response organization and gives information on the Incident Command System, the federal and State roles during oversight of an incident or when the government leads the response; and emergency declarations and spills of national significance.
Annex C outlines the operational administration of federal and State laws and statutes.
Annex D gives plan review and update-procedures and schedule.
Annex E offers a summary of area resources, including response equipment; tribal governments and Native organizations; environmental and volunteer groups; state term contracts; special forces resources; communications; and waste management and disposal information.
Annex F presents chemical countermeasures, dispersants, and other spill mitigating substances, devices and technology. Specific guidelines for dispersant use and *in situ* burning are included.
Annex G is the Wildlife Protection Guidelines for Alaska, a document that usually appears as a self-contained entity separate from the Unified Plan.
Annex H provides a standard site safety plan and training guidelines.
Annex I deals with public affairs and has general rules for community relations and media interaction, contacts and checklists.
Annex J addresses radiological response procedures.
Annex K contains the applicable Memorandums of Understanding/Agreement that have been entered into by federal and state agencies.
Annex L addresses hazardous materials by providing an overview of chemical hazards, a chemical profile of Alaska, the extremely hazardous substances at facilities, the chemical risks, and the response capability in Alaska.
Annex M offers the cultural resources protection guidelines.
Annex N gives a listing of available shoreline cleanup and assessment guidelines.
Annex O thru Y are reserved for future use. Annex O will be used for the new Potential Places of Refuge annex.
Annex Z provides definitions and a listing of the abbreviations and acronyms that appear in the plan.

SUBAREA PLAN SYNOPSIS

Response Section lists the essential and most immediate federal and state emergency contact numbers on the first page. Emergency contact numbers for other federal and state agencies, plus those for communities within the subarea, follow. Additionally, information on the spill response command structure, procedures and protocols is included.
Resources Section provides two-page profiles on each of the communities in the Subarea; a listing of commercially and non-commercially available equipment; an information directory, offering contact numbers to a variety of resources and companies; and an explanation of logistical considerations, assets, and other supplemental logistics information.
Hazmat Section lists response protocols and the state and federal authorities, policies, responsibilities, and response capabilities. The section also provides a general risk assessment of hazardous substances found within the subarea.
Sensitive Areas Section gives profiles on the biological resources and human use resources that could be adversely affected by a spill. The section includes: graphs depicting the sensitivity of resources; priority ratings from “lesser” to “major” for areas of environmental concern; land management designations and maps; Most Environmentally Sensitive Areas maps; and areas of local concern. Attachments, such as those containing water intake/user lists or salmon escapement tables, may also be found in this section.
Background Section explains legal requirements and boundaries and provides a description of the plan, area of responsibility, the development process and players, and the physical attributes of the subarea, including maps and tidal current flow charts, when available. The section lists the state and federal response priorities, significant historical spills, and abbreviations contained in the plan. Where available, the risk assessment maps developed for the places of refuge project are included in this section.
Scenarios Section, depending upon the subarea, will usually offer scenarios for the worst case, maximum most probable case, and average most probable case for spills in coastal and inland habitats. These scenarios depict how a response to an incident might unfold. When appropriate, inland and vessel hazmat scenarios may also be presented.
Geographic Response Strategies Section provides site-specific spill response plans to protect priority sensitive areas in a specific geographic area. In addition to the individual GRS for the subarea, this section presents a location map and descriptions of all the spill response tactics that may be identified for use in a GRS.
Potential Places of Refuge Section identifies potential locations to move a vessel needing assistance, where actions can be taken to stabilize and/or repair the vessel, in order to protect human life, reduce hazards to navigation, and/or protect natural resources and other uses of the area. In addition to the two-page PPOR, the Background Section includes the risk maps used to assess and identify the PPOR locations.

SPILL RESPONSE PLANNING TIMELINE


Photo courtesy of the Exxon Valdez Oil Spill Trustee Council

March 1989 The Exxon Valdez oil tanker runs aground in Prince William Sound spilling approximately 11 million gallons of crude oil.

April 1989 The Alaska State Legislature passes House Bill 261 "…requiring the Department of Environmental Conservation to prepare and to annually review and revise a master oil and hazardous substance discharge and prevention contingency plan for the state and regional oil and hazardous substance discharge and prevention contingency plans for certain regions of the state…."

August 1990 Congress passes the Oil Pollution Act of 1990, which mandates a "National Oil and Hazardous Substances Pollution Contingency Plan" to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances.

May 1991 The ADEC releases a draft State Master Plan that meets the spill response planning requirements of the 1989 Alaska statute.

February 1992 The ADEC enters into an agreement with the USCG and the EPA to jointly develop oil spill and hazardous substance release response planning for the state.

Fall 1993 The State Emergency Response Commission and the Alaska Regional Response Team approve joint federal/state planning concept.

May 1994 The *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases* (the Unified Plan) is published.

April 1995 State and federal agencies conduct the first full exercise of the Unified Plan using the Incident Command System.

May 1996 Change One to the Unified Plan is published.

Spring 1997 After consulting with state resource agencies, the ADEC begins a series of meetings with the USCG to identify possible locations of safe refuge within Cook Inlet for vessel in distress.

July 1997 The Subarea Contingency Plans for Alaska's Southeast Subarea, Prince William Sound Subarea, and Cook Inlet Subarea are published.

July 1998 The Subarea Contingency Plan for the Kodiak Subarea is published.

November 1998 Nearly 100 representatives from industry, government, citizen groups, and general public meet in Anchorage to discuss geographic response plans and their applicability to Alaska and to draw up a set of guidelines for development.

February 1999 The recommended guidelines for geographic response strategies (GRS) are presented to the Alaska Regional Response Team, which endorses the GRS concept.

March 1999 The Kodiak Island Borough hires a contractor to begin developing GRS for the Kodiak Subarea.

SPILL RESPONSE PLANNING TIMELINE, CONTINUED

April 1999	Representatives from federal and state agencies, the Prince William Sound (PWS), and Cook Inlet (CI) Regional Citizens Advisory Councils (RCAC), spill cooperatives and industry assemble to form a workgroup to develop GRS for the Cook Inlet Subarea.
May 1999	Change Two to the Unified Plan is published.
July 1999	Change One to the Prince William Sound Subarea, incorporating the Copper River Delta and Flats addendum, is published.
September 1999	The Subarea Contingency Plan for the Aleutians Subarea is published.
Fall 1999	After a series of public meetings, a workgroup comprising representatives from federal and state agencies and the CI RCAC releases a list of potential places of refuge for vessels in distress within Cook Inlet.
December 1999	The Subarea Contingency Plan for the North Slope Subarea is published.
May 2000	Representatives from federal and state agencies, the PWS RCAC, and industry assemble as a workgroup to develop GRS for the Prince William Sound Subarea.
June 2000	The Subarea Contingency Plan for the Interior Subarea is published.
June 2001	The Subarea Contingency Plans for Northwest Arctic Subarea, Western Alaska Subarea, and Bristol Bay Subarea are published.
October 2001	Twenty-one GRS for the Kodiak Subarea, the first officially completed GRS for the State, are published.
November 2001	Representatives from federal and state agencies and a spill response cooperative assemble to direct the development of 60 GRS for the Southeast Subarea in which the costs are underwritten by a settlement with Royal Caribbean Cruise Lines.
April 2004	Representatives from federal and state agencies, the PWS RCAC, and industry assemble as a workgroup to identify PPOR and the necessary decision-making guidelines for inclusion in the Prince William Sound SCP.
May 2004	Change One to the Cook Inlet Subarea, which includes 129 completed GRS for Cook Inlet and the first identification of PPOR in an SCP, is published.
October 2005	Change Two to the Prince William Sound Subarea, which includes 58 completed GRS and the guidelines, locations and descriptions of 16 PPOR, is published.
March 2006	Representatives from federal and state agencies, the PWS and CI RCACs, and industry assemble as a workgroup to identify PPOR and the decision-making guidelines for inclusion in the Kodiak SCP.
April 2006	Change One to the Southeast Subarea, which includes 60 completed GRS, is published.

ADEC FIELD OPERATIONS GUIDE
ALASKA INCIDENT MANAGEMENT SYSTEM

OVERVIEW

Federal directives and State law mandate use of the Incident Command System (ICS) by their agencies as the emergency management system for oil and hazardous substance spill response.

Guide for Oil and Hazardous Substance Response

ADEC Response Action Plan. The overall State incident management process began with the creation of the *ADEC Response Action Plan* (RAP) in June 1996. Additional Type 1 RAPs (region-specific RAPs developed for specific areas of the State) were also developed initially for Cook Inlet and Prince William Sound. The RAP was consistent with the Incident Command System (ICS) as described in the *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/ Releases* (Unified Plan).

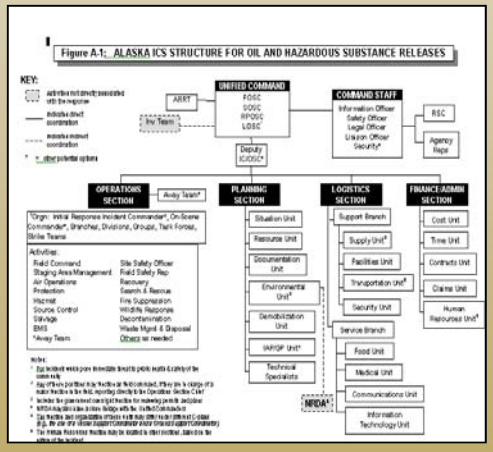
ADEC Response Field Operations Guide. The *ADEC Field Operations Guide* (FOG) was published in June 1998 and describes how the agency responds to releases of oil and other hazardous substances. The FOG integrated the USCG FOG document (June 1996) and the *Alaska Clean Seas Incident Management System (IMS) Manual*, with ADEC's RAP.

Alaska Incident Management System

The initial version of the *Alaska Incident Management System* (AIMS) *Guide* (January 2000) was developed by the Statewide Oil and Hazardous Substance IMS Workgroup, consisting of representatives from Federal/ State agencies, industry and spill cooperatives. The initial AIMS Guide merged the concepts of the NCP with the National Interagency Incident Management System (NIIMS), and received acceptance by both government and industry users in Alaska. The AIMS was customized to meet Alaska's unique needs and maintains consistency with the USCG FOG update.

The Alaska IMS Workgroup subsequently produced an updated version of the AIMS Guide, with the current edition dated November 2002. ADEC provided over 1750 copies of this updated version of the AIMS Guide to users across the state and nationwide.

One other major change in the ADEC Incident Management System was the adoption of the Crisis Management Team (CMT) concept. The ADEC CMT has been activated on several occasions, including: the *M/V Kuroshima* incident in November 1997; the Trans Alaska Pipeline System (TAPS) bullet hole incident (October 2001); and the *M/V Selendang Ayu* response (December 2004).



SPILL TACTICS FOR ALASKA RESPONDERS MANUAL

The *Spill Tactics for Alaska Responders* (STAR) *Manual* provides a standardized oil spill response tactics manual specific to the State of Alaska. The manual is intended to be a standard tactical reference for oil spill planning and response activities. The tactics described in the manual include primarily those activities that occur during the emergency response phase of an oil spill. It is available for use by the spill response community, including federal, state, local, industry, and spill response organizations throughout Alaska.

This PERP project was initiated in April 2004 through a contract with Nuka Research, Inc. Phase I of this project involved a nationwide and international literature search to identify other spill response tactics manuals and guides, while also seeking permission to use the materials for the development of an Alaska STAR Manual. Over forty sources of tactics reference material, including existing spill response tactics manuals, as well as field response guides, oil spill contingency plans, general reference documents, and internet reference sites were noted. Phase 2 of the project resulted in the convening of a workgroup that included federal and state agencies, the oil industry and spill cooperatives. Phase 3 saw the development of a field-sized guide as well as a full-sized version of the STAR Manual for use in incident command posts.

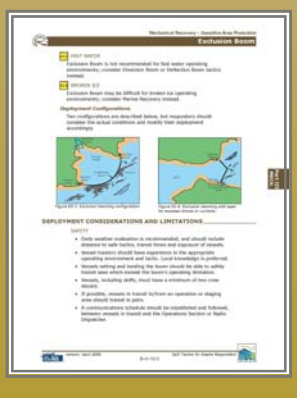
The workgroup developed the STAR Manual through a consensus-based process involving federal and state spill response agencies working with representatives of oil spill response organizations and contingency plan holders. Additional input was sought from natural resource management agencies, regional citizen's advisory councils, local governments, and other stakeholders.

The tactics and equipment described in the STAR Manual specifically address the uniquely challenging and diverse operating environments that exist across the State of Alaska. Because the information in the manual reflects the response priorities and concerns of both planners and responders, it has the potential to increase the spill response efficiency of spill response organizations by providing guidance on the resources and capabilities required to accomplish the specific tasking likely to come from the IMT during a response.

The information in the STAR Manual bridges the gap between oil spill contingency planning and response by providing standard tactics and terminology that can be easily transferred from contingency plan to an incident action plan. The standardization will facilitate mutual aid among response organizations and may improve resource ordering and allocation during a response.

The definitions and descriptions contained in the manual provide a clear, consistent, statewide standard for oil spill tactics and response resource classification. The STAR Manual includes non-prescriptive guidance on meeting the response planning standard for Oil Discharge Prevention and Contingency Plans (C-Plans), and industry may reference the manual in the C-Plans submitted to ADEC. The STAR Manual will eventually be referenced in the Unified Plan and the ten federal/state subarea plans.

The manual complements the geographical response strategies (GRS) developed in Alaska. The GRS reference the STAR Manual's tactics as part of the response strategies designed to protect sensitive coastal areas.



TUNDRA TREATMENT GUIDELINES

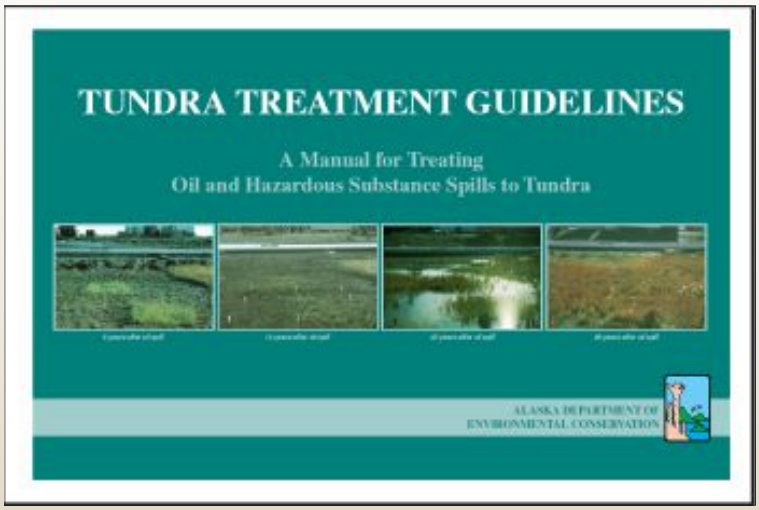
ADEC personnel responding to spills to the tundra recognized the need for specific tactics to minimize damage to this fragile environment during the response and cleanup. As a result, through the use of a contractor, PERP conceived and funded the *Tundra Treatment Guidelines: A Manual for Treating Oil and Hazardous Substance Spills to Tundra.* This manual combines the experience of industry, university, and government agencies responding to tundra spills and conducting field experiments on Alaska's North Slope.

The manual provides a menu of tactics that can be used to treat and monitor tundra impacted by spills of crude oil, petroleum products, seawater, and other substances after initial response efforts have eliminated the threat of large-scale spill migration. The manual offers a framework for identifying treatment goals, selecting tactics, and assembling an overall tundra treatment strategy. The tactics are organized into three subject areas: Planning, Treatment, and Assessment and Monitoring.

Emphasis was placed on developing treatment strategies that reduce toxicity, mobility, and volume of spill residuals in tundra to allow re-vegetation and control risks to wildlife, aquatic, and human receptors, while at the same time protecting sensitive tundra soils from physical damage and induced thermal effects. The manual includes an extensive bibliography of references used to determine the appropriateness and effectiveness of various treatment tactics.

A companion manual, *Tundra Spill Cleanup and Remediation Tactics,* provides further explanation and justification for the use of specific tactics on spills of various substances to tundra. This manual examines historical spills to tundra and summarizes what treatments have been effective in various types of tundra in winter and summer.

As more information and tactics are refined, both manuals will be updated to capture lessons learned and/or new techniques



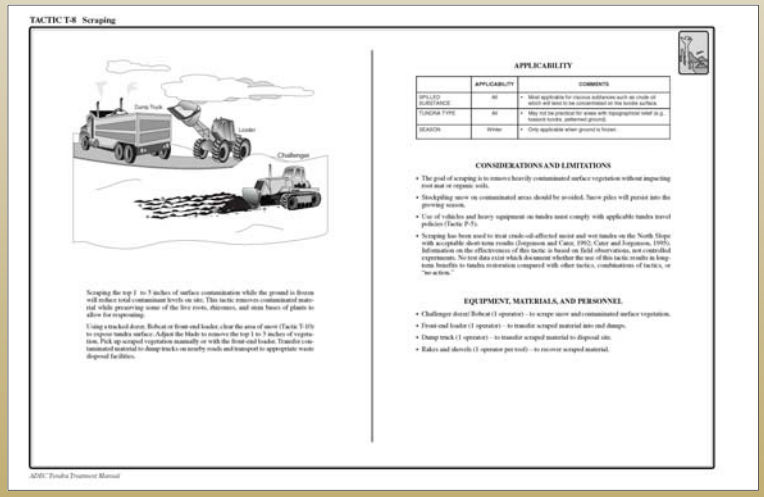



Photo credit: Unified Command Photo

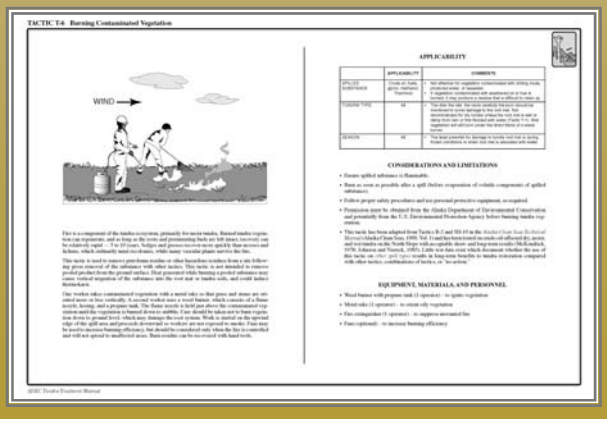
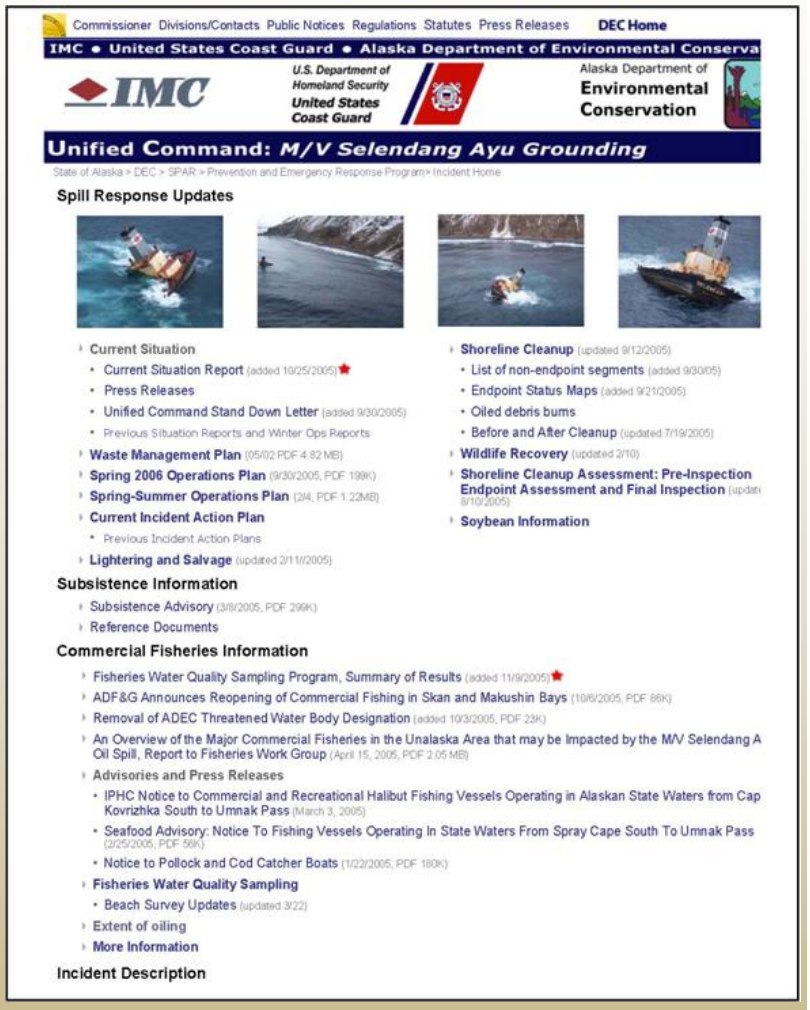



Photo credit: Unified Command Photo

ADEC—UNIFIED COMMAND WEBSITE

On November 26, 1997, the *M/V Kuroshima* went aground on Unalaska Island near Dutch Harbor, releasing 39,000 gallons of bunker oil. The response and cleanup resulted in considerable interest by media and public. The Department had recently established an Internet website, and it was decided that this website would be an ideal medium for making information available on the spill response. Conceived by PERP, this became the first-ever Unified Command website.



The *M/V Kuroshima* UC website received accolades from individuals and agencies in Alaska, other states, and even other countries. As a result of this success, the ADEC website became the standard mechanism for providing spill response information to concerned stakeholders, the media, and the general public. The ADEC website has served as a prototype for many other organizations.

Beginning in 1998, staff posted all situation reports on the ADEC website, along with additional information and photos for the higher profile incidents. From 1998 – 2005, more than 375 incident response summaries were made available on the website, including numerous UC-led responses. In addition, several drills have included establishing a UC website.

LIST OF UNIFIED COMMAND WEBSITES

- *M/V Kuroshima* (11/26/1997)
- AK RR Derailment, Canyon (10/31/1999)
- AK RR Derailment, Gold Creek (12/22/1999)
- AK RR Derailment , Wasilla (07/19/2000)
- *F/V Windy Bay* sinking (08/04/2001)
- TAPS Bullet Hole (10/04/2001)
- *Kivalina* Barge Grounding (10/08/2002)
- *M/V LeConte* (05/10/2004)
- *M/V Selendang Ayu* (12/07/2004)

ALASKA GRS DEVELOPMENT

INTRODUCTION

Geographic response strategies (GRS) are site-specific spill response methods used to protect sensitive coastal environments from the deleterious effects of petroleum product spills or other hazardous substance spills.

With thousands of miles of coastline, Alaska possesses many unique, vital or highly sensitive areas that merit immediate attention and protection in the event of a spill. GRS are one tool that can help expedite a successful response or mitigation of a spill impact. Several regions of the state have been identified as warranting the initial efforts for GRS development due to high vessel or shipping traffic.

To address the development of GRS for a region of Alaska, a workgroup is formed that has representatives from industry, public interest groups, applicable Regional Citizen Advisory Councils (RCAC), and federal, state, tribal and local governments.

Sites are selected based on three primary considerations: the environmental or cultural sensitivity; the risk from an oil spill; and the ability to protect the site. Biota resource factors, such as amount and type needing protection, plus recreational or local significance aspects are considered. The federal and state natural resource trustee agencies make preliminary site selections, which are then published for public comment. After consideration of public inputs, the workgroup selects the GRS locations.

A tactics subgroup designs the response strategy using basic spill response tactics, and during the design process, members attempt to visit each location whenever feasible, thus gaining valuable site knowledge, which greatly assists in proper design. The final GRS product, which includes a site map, photograph, and table of associated information, describes the resources to protect, the operational tactics to carry out the protection, equipment and personnel needs, site access, and staging considerations.

The completed GRS for a region are compiled as an addendum to the appropriate Federal/State Subarea Contingency Plan (SCP).

BACKGROUND

The initial steps toward development of GRS for Alaska began with a 1998 study completed by the Prince William Sound RCAC that examined what other states had done to prepare site-specific oil spill response plans. In June 1998, the Alaska Regional Response Team responded to the PWS RCAC study by tasking the state-wide Sensitive Areas Workgroup to develop an approach to incorporate geographic response planning into the Alaska contingency planning process.

At a November 1998 workshop in Anchorage, which brought together nearly 100 representatives from industry, government, citizen groups, and general public, participants drew up a set of guidelines for GRS development. The Kodiak Island Borough, through the use of a private contractor, developed the first set of GRS in the state. During the same time frame, the Department initiated a workgroup with federal agencies and the RCACs to develop a process for creating GRS in Alaska and to begin work on at least 20 GRS for the central portion of the Cook Inlet Subarea. The work proved so successful that efforts have not only continued in Cook Inlet but expanded to Prince William Sound, Southeast Alaska, and other areas of the state.

The approach created in Cook Inlet has provided a model to guide GRS development elsewhere in Alaska. The Department has co-chaired all GRS workgroups, except for the initial GRS project undertaken in Kodiak.

ALASKA GRS DEVELOPMENT, CONTINUED

All participants, including industry, government and citizen groups, in the various endeavors to develop GRS have spoken very highly of the process and the product

GRS DEVELOPMENT STATUS by SUBAREA

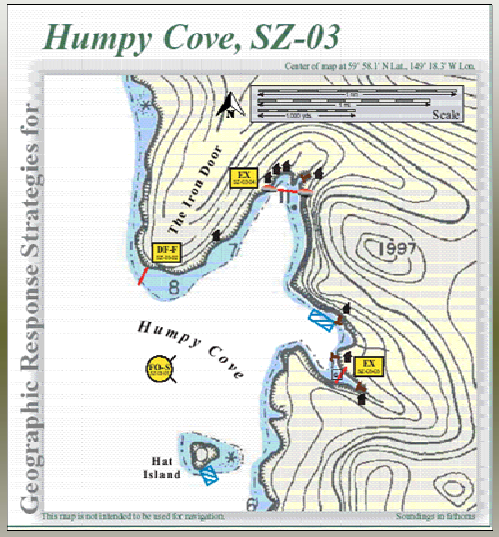
Cook Inlet – 129 completed

Work on GRS for Cook Inlet began in the spring of 1999. The original workgroup divided the Cook Inlet Subarea into six zones, with initial work addressing the Central Zone since the majority of tanker loading and unloading, in addition to the oil platforms, occur in this zone. The majority of the funding of the GRS effort has come from the PWS and Cook Inlet RCACs, the Kenai Peninsula Borough, and the Department. The RCAC has provided management of the contractor responsible for compilation of information and final production of the documents. The Cook Inlet Spill Prevention and Response Inc. spill cooperative, with assistance from industry members and agency personnel, field-tested many of the GRS leading to critical refinements on several GRS. The GRS went through final public review as part of Change 1 to the Cook Inlet SCP, which the Department published in 2004.

Prince William Sound – 58 completed

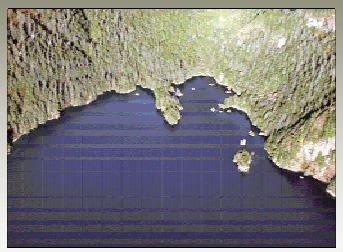
In May of 2000, obligated by new language in the Department's agreement with the oil shippers, a workgroup that included representatives from each of the TAPS owners assembled to draft a minimum of 20 GRS for Prince William Sound. The workgroup divided PWS, not including the area of the Copper River Delta and Flats, into four zones and chose to develop five GRS for each zone. These GRS were completed by 2003 (in response to community concerns over sites near the village of Tatitlek and elsewhere, nine additional GRS were drafted above the minimum 20). Using experienced gained from actual deployments during the spill response to the grounding of the F/V Windy Bay in August, 2001, an additional six GRS were added. A second round of GRS began in 2003, bringing the total number developed for PWS to 58. These GRS received final public review in 2005 as part of Change 2 to the PWS Subarea Contingency Plan. The spill response cooperative, SERVS, has field-tested more than 20 of the GRS. Two draft GRS have been developed for sites within the Copper River Delta and Flats area.

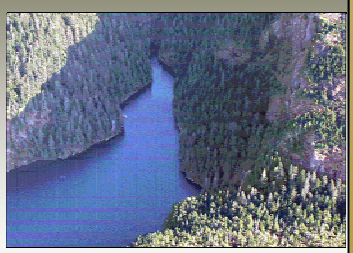
HUMPY COVE



Seward Zone Geographic Response Strategies — DRAFT January 18, 2005

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (satellite)	Special Considerations
SZ-04-01	**Thumb Cove** Nearshore waters in the general area of: Lat. 60° 00.07 N Lon. 149° 19.64 W	**Nearshore Free-oil Recovery** Maximize free oil recovery in the offshore & nearshore environment of Thumb Cove depending on spill source and trajectory.	Deploy nearshore free-oil recovery strike teams upwind and up current of Thumb Cove. Use aerial surveillance to locate incoming slicks.	Multiple nearshore free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Seward	Marine Chart 16682-1	Same as SZ-04-02	Vessel master should have local knowledge. Site surveyed 9/00/07 GRS WG.
SZ-04-02	**Thumb Cove** Lat. 60° 00.3 N Lon. 149° 18.02 W	**Divert and Collect** Divert oil to shore-side collection points determined by spill source and trajectory.	Transport equipment by vessel (Class 2/3/4) from Seward. Deploy anchors and boom with fishing vessels or skiffs(Class 3/4/6). Place protected-water boom at the proper angle to divert oil to collection site. Set up collection unit and tend throughout the tide.	**Deployment Equipment** 400 ft. protected-water boom 1 sections x50 ft. shore-seal boom 5 ea. anchor systems (~20 lbs.) 1 ea. deadman anchor for beach 1 ea. shore side collection unit. **Vessels** 2 ea. class 3/4 2 ea. class 6 **Personnel / Shift** 11 ea. vessel crew 3 ea. response techs. **Tending: Vessels** 1 ea. class 3/4 1 ea. class 6 **Personnel / shift** 4 ea. vessel crew 2 ea. response techs.	Vessel platform	Marine Chart 16682-1 Title 16 permitting required from ADF&G	Fish: Intertidal spawning-salmon (May- Sept.) Marine mammals-sea otter, seals Birds- shorebird feeding, waterfowl-loons/Jbds. Habitat sheltered tidal flats, eel grass, fucus, intertidal resources-mussels Human use high recreational use (June- Sept.), commercial fishing.	Take appropriate measures as outlined in Part 2 of this document to protect the beach at the collection site. Chugach National Forest owns the head of the cove and Lake's Creek. State Park public use cabins are on the south side of the cove. Site surveyed 9/00/02 GRS WG. Tested: no.
SZ-04-03	**Thumb Cove** Northeastern beach Lat. 60° 00.74 N Lon. 149° 17.47 W	**Exclusion** Exclude oil from impacting the northeastern beach.	Transport equipment by vessel (Class 2/3/4) from Seward. Deploy anchors and boom with fishing vessels and skiffs(Class 3/4/6). Place shore-seal boom across inter-tidal zone and protected-water boom in a chevron pattern in front of the eel grass on northeastern beach. Tend throughout the tide.	**Deployment Equipment** 1200 ft. protected-water boom 2 sections x50 ft. shore-seal boom 4 ea. anchor systems (~20 lbs.) 1 ea. apex anchor (~200 lbs.) 4 ea. anchor stakes **Vessels/Personnel/Shift** Same as SZ-04-02 **Tending Vessels/Personnel/Shift** Same as SZ-04-02	Vessel platform	Marine Chart 16682-1	Same as SZ-04-02	Vessel master should have local knowledge. REPORT any cultural resources found during operations to FHSC Historic Properties Specialist. Site surveyed 9/00/02 GRS WG. Tested: no.
SZ-04-04	**Thumb Cove** Lagoon at the head of the cove Lat. 60° 00.76 N Lon. 149° 17.53 W	**Exclusion** Exclude oil from entering the small lagoon near the head of Thumb Cove.	Transport equipment by vessel (Class 2/3/4) from Seward. Deploy anchors and boom with skiffs (Class 6). Place and anchor shore-seal boom across the entrance to the lagoon. Tend throughout the tide.	**Deployment Equipment** 1 sections x50 ft. shore-seal boom 6 ea. anchor stakes **Vessels/Personnel/Shift** Same as SZ-04-02 **Tending Vessels/Personnel/Shift** Same as SZ-04-02	Vessel platform	Marine Chart 16682-1	Same as SZ-04-02	Vessel master should have local knowledge. Site surveyed 9/00/02 GRS WG. Tested: no.





The Alaska Department of Environmental Conservation, Cook Inlet Regional Citizens' Advisory Council, Kenai Fjords National Park, the Kenai Peninsula Borough and Prince William Sound Regional Citizens' Advisory have provided funding for this project.

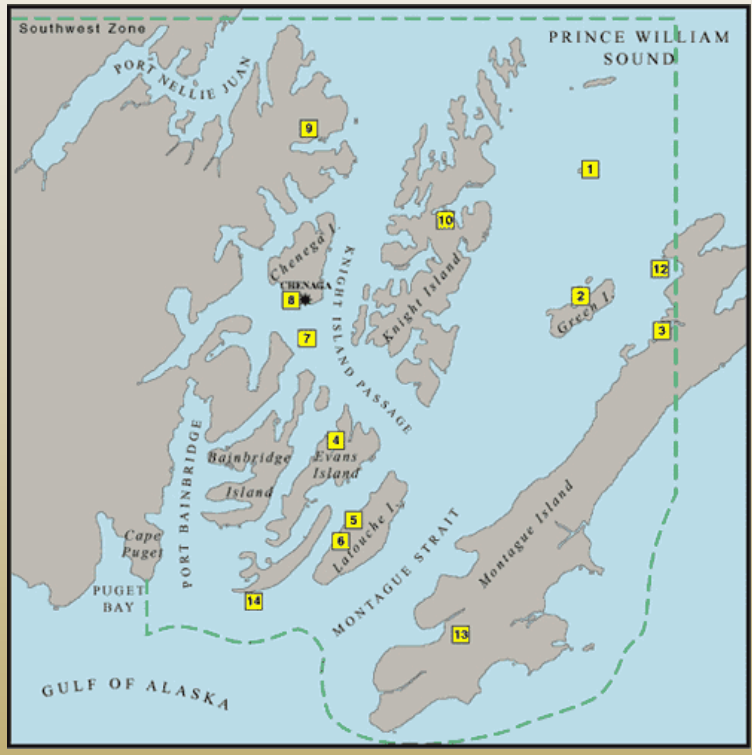
ALASKA GRS DEVELOPMENT, CONTINUED

Southeast Alaska – 60 completed

A Department settlement with Royal Caribbean Cruise Lines concerning spill violations resulted in $250,000 in funds for the development of 60 GRS for an area that covers all cruise ship travel within Southeast Alaska. Work began with a contractor in the fall of 2001. With input from federal and state resource agencies and the public, the workgroup identified 60 priority sites out of an initial list numbering over 120 (sites not selected may be addressed during subsequent GRS projects). The 60 GRS received final public review as part of Change 1 to the Southeast Subarea Contingency Plan in 2005.

Kodiak – 21 completed, approximately 20 nearing completion

In 1999, the Kodiak Island Borough secured funding from the Alaska Coastal Management Program and the Local Emergency Planning Committee to hire a contractor and begin development of GRS for the Kodiak Subarea. Additional assistance in the drafting of the GRS came from Tesoro Alaska Co., NOAA, the USCG and the Department. Twenty-one GRS were completed and published as part of the Kodiak SCP in October, 2001. In 2005, with the support of the Prince William Sound RCAC and the Department, efforts began on another round of GRS construction.



North Slope

The spill cooperative Alaska Clean Seas has produced a multi-volume Technical Manual that generally serves the purpose of geographic response strategies. Volume 1: Tactics Descriptions lists and explains the response tactics, equipment and logistical considerations that would be employed during a response on the North Slope. Volume 2: Map Atlas contains 135 maps that show all the areas along the North Slope that could be affected by a spill, specify the “priority protection sites,” and list the preferred response tactics for protecting these sites.

ESI MAPPING STATUS

The most widely used approach to sensitive environment mapping of coastlines in the United States is the *National Oceanic and Atmospheric Administration's Environmental Sensitivity Index* (ESI). Initially created for oil spill response in 1978, NOAA continues developing and upgrading ESI information and maps for a variety of users.

BACKGROUND

A main objective of spill response in the United States, after protecting human life, is to reduce the environmental consequences of both spills and the subsequent cleanup efforts. To do this, it is necessary to identify vulnerable coastal locations before a spill happens, so that protection priorities can be established and cleanup strategies identified. To meet this need, NOAA researchers, working with colleagues in State and federal governments, have produced Environmental Sensitivity Index maps. ADEC assisted in the development of the Alaska-specific ESI maps by coordinating and funding the participation of ADNR mapping staff and providing post-publication map review.

PURPOSE

ESI maps serve as quick references for spill responders and coastal zone managers. ESI maps contain three kinds of information:

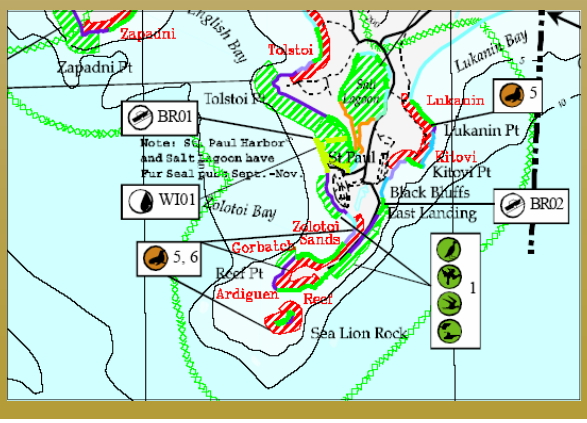
- **Shorelines** are ranked based on their physical and biological character, then color-coded to indicate their sensitivity to oiling.
- Sensitive **biological resources**, such as seabird colonies and marine mammal hauling grounds, are depicted by shaded polygons and symbol icons to convey their location and extent on the maps.
- ESI maps also show sensitive **human-use resources**, such as water intakes, marinas, and swimming beaches.

ESI shoreline rankings have been defined on the basis of factors that influence sensitivity to oiling, including: substrate size, permeability, trafficability, and mobility; slope of the intertidal zone; relative degree of exposure of the physical setting; ease of cleanup; and biological productivity and sensitivity. A ranking of 1 represents shorelines least susceptible to damage by oiling, and 10 represents the locations most likely to suffer detrimental effects. Shorelines ranked as 1 include steep, exposed rocky cliffs where oil cannot penetrate into the rock and will be quickly washed off by wave and tidal action. Shoreline ranked as 10 include protected, vegetated wetlands, such as swamps, where oil can penetrate deeply into the substrate and inflict significant damage to a variety of plants and animals.

Under the ESI method, NOAA has classified into seven categories those animals and plants that are especially vulnerable to the effects of oil spills. Many species that are vulnerable to oil are wide-ranging and may be present over large areas at any time of year. Exposure during certain times of the year can be particularly dangerous for some species. ESI maps show where these most sensitive species, life stages, and locations exist, but do not necessarily show the entire area where member of a sensitive species occur. Biological animal resources include birds, fish, invertebrates, marine mammals, and terrestrial mammals. Habitat resources include salt marshes, coral reefs, eelgrass, kelp, and sheltered tidal flats.

Depending on the Alaskan subarea, maps are available in paper, in various electronic versions, and online at http://www.asgdc.state.ak.us/maps/cplans/subareas.html

NOAA has compiled enough data for certain areas of coastal Alaska to create ESI atlases, which include a set of maps and additional pages of information about the biological resources and other features depicted.



Example – ESI Map close-up with icon information:
A section of an Environmental Sensitivity Index map showing part of St. Paul Island representing one of the most environmentally sensitive areas in all of North America. Shorelines are color-coded to show their sensitivity to oiling. For example, the salt lagoon shows the highest shoreline sensitivity found on the Pribilofs because of its sheltered nature. Sand-dominated tidal flats are found along both sides of the entry channel leading into the lagoon. Symbols mark locations important to spill responders, such as areas where seals or sea lions congregate or breed (marked with a sea lion symbol) and areas where different kinds of birds (such as shorebirds, waterfowl, or raptors) concentrate for feeding or nesting.

ESI MAPPING STATUS, CONTINUED

NOAA creates and verifies its maps through overflights, aerial photo interpretation, remotely-sensed data, and ground-truthing. The mapping scale used is 1:63,360 or 1:250,000.

Here is the status of ESI mapping in the nine subareas of Alaska that contain coastal shoreline:

Aleutians Subarea: Available electronically in a meta-data atlas CD version. The Pribilof Islands area is available in a paper map and electronically in a PDF version.

Bristol Bay Subarea: Available electronically in a meta-data atlas CD version.

Cook Inlet Subarea: Available in paper map (one per season) and electronically in a meta-data atlas CD version.

Kodiak Subarea: Available in paper map (one per season) and a PDF version that includes the Shelikof Strait area.

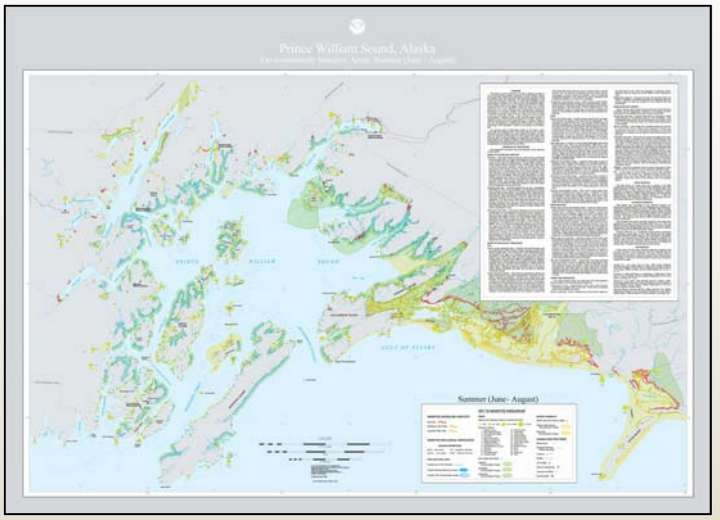
North Slope Subarea: Available in paper map (one per season) and electronically in a two-volume meta-data atlas CD version and in an atlas paper format.

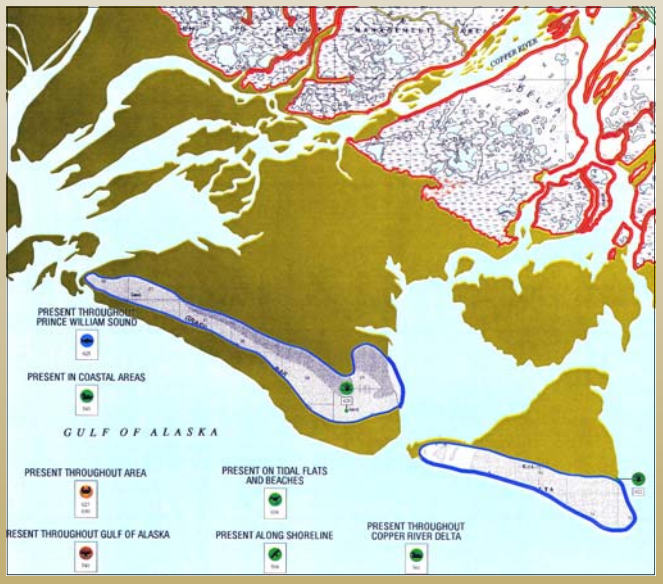
Northwest Arctic Subarea: Available electronically in a two-volume meta-data atlas CD version and in an atlas paper format.

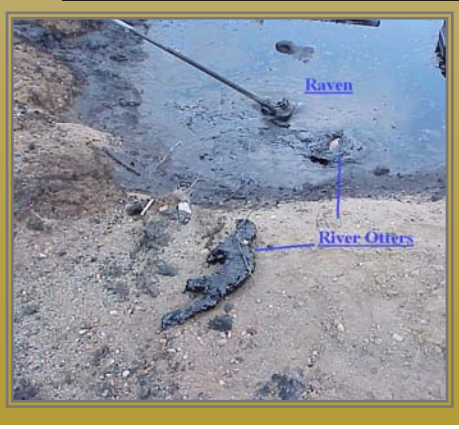
Prince William Sound: Data digitized and remapped in 2000 and available electronically in a two-volume meta-data atlas CD version and in an atlas paper format.

Southeast Alaska Subarea: Drawing upon work done between 1992 and 2001, a complete electronic version is now available for the area in a two-volume meta-data atlas CD set.

Western Alaska Subarea: Available electronically in a meta-data atlas CD version.







PLACES OF REFUGE GUIDELINES

BACKGROUND

Alaska has over 6,000 miles of coastline with an extensive commercial and recreational fleet in challenging marine waters. This mix results in vessels occasionally being wrecked, damaged or leaking. When an incident occurs, decision-makers evaluate the risks and determine the best option for a vessel in distress. One option is for the vessel to proceed to a temporary safe haven called a place of refuge for stabilization and repairs.

Decision-makers may face the difficult issue of moving a vessel into a localized area to prevent or minimize area-wide impacts. The public and stakeholders often object to using their local area for a place of refuge while area-wide users support the action to protect their resources. Nevertheless, a local site may be the best option to protect area-wide resources.

PERP has actively worked on the places of refuge issue since 1996 and has led the effort to establish Places of Refuge Guidelines in Alaska and the West Coast. The Places of Refuge issue was brought to worldwide attention during the *T/V Prestige* incident off the coast of Spain in 2002. The inability to identify an appropriate place of refuge for the *T/V Prestige,* a foundering tanker, subsequently resulted in the tanker's sinking and the spilling of approximately 30,000 tons of heavy fuel oil.

The State of Alaska identified the need for places of refuge prior to the *T/V Prestige* incident, and has addressed the issue during spill drills and actual incidents. The Perl Island drill in 1996 and the Prince William Sound tanker drill in 2003 both addressed the issue of identifying a safe location for lightering, stabilization and temporary repair.

In 1997, the barge *Oregon* was holed by its tug and flipped in Cook Inlet, Alaska, spilling its entire cargo of 12,500 tons of urea fertilizer and 1600 gallons of diesel fuel. The Captain of the Port granted permission for the tug to take the barge to Kachemak Bay for damage assessment of the hull and temporary anchoring. Local citizens, stakeholders, and state resource agencies criticized the decision to take the barge into Kachemak Bay, a National Estuarine Research Reserve and a State-designated Critical Habitat Area. Following the incident, PERP and the U.S. Coast Guard met with stakeholders, resource agencies and the public and identified potential places of refuge in the Cook Inlet and Kenai Peninsula areas. The list was finalized in 1999 and added to the Cook Inlet Subarea Contingency Plan. However, the Cook Inlet list did not adequately address the decision-making process to direct a ship in distress to a place of refuge.

GUIDELINE DEVELOPMENT

In 2003 and 2004, PERP staff concurrently developed Places of Refuge guidelines with the Pacific States/British Columbia Oil Spill Task Force and the Alaska Regional Response Team working groups. The guidelines provide step-by-step procedures to decide if a ship in distress should be offered a place of refuge and risk factors to consider for identifying the actual anchoring or mooring locations. The Pacific States/British Columbia Oil Spill Task Force guidelines were approved in 2004 and provide a template for member states and the province to use in developing decision-making and pre-incident plans tailored to their area.

The Alaska guidelines were drafted concurrently with the Oil Spill Task Force process and sections of their guidelines were modified to reflect our state's conditions, and were approved by the Alaska Regional Response Team in 2004. The Alaska guidelines provide a predictable and calculated process to evaluate the best option for the ship in distress. Operational, environmental, and public health issues are all considered to determine the best location for the vessel.

PLACES OF REFUGE GUIDELINES, CONTINUED

In 2004 the state ferry *M/V Le Conte* grounded and required a place of refuge to make temporary repairs. The draft ARRT guidelines were used to address the request for a place of refuge. The Unified Command used the draft ARRT guidelines as an aid during both the *M/V Le Conte* incident and the *M/V Selendang Ayu* wreck at Unalaska Island in 2004.

The Alaska Places of Refuge Guidelines are divided into two parts: the decision-making process and the pre-planning guidelines.

The decision-making process identifies who is in charge and their jurisdictions, incident management structure, and those decision-making factors needed to determine the appropriate course of action to prevent and mitigate the short- and long-term impacts to public health and the environment. Decisions are made using:

- Information from the ship in distress
- Consultation with the Unified Command, agencies and stakeholders
- Checklist of human health and safety, environmental, economic risks, and operational criteria

The pre-planning guidelines identify potential places of refuge for consideration during the decision-making process. These guidelines provide for formation of area-specific workgroups to formulate a risk assessment process, consult with local mariners and pilots associations, and inventory potential places of refuge and grounding sites. Each of these potential sites include information such as:

- Geographic response strategy information
- Water depths, bottom type and shoreline type
- Seasonal information
- Port operations and repair capabilities
- Sensitive resource information.

Places of Refuge incidents in Alaska

- *T/V Exxon Valdez*, 1989
- Barge *Oregon*, 1997
- *M/V Wilderness Adventurer,* 1999
- *M/V Le Conte*, 2004
- *M/V Selendang Ayu,* 2004

A tanker transiting to its approved place of refuge in Kachemak Bay.
Photo: Nuka Research and Planning Group

USCG photo

PREPAREDNESS

STATEWIDE HAZMAT RESPONSE TEAM

BACKGROUND

ADEC initiated a statewide hazmat planning effort in 1996 by forming a workgroup to develop Level A capability for a hazardous chemical release. At that time, primary representatives to the workgroup included the Municipality of Anchorage, the Fairbanks North Star Borough, and ADEC. A smaller sub-group was also established to discuss Hazmat response capabilities for Southeast Alaska, but was subsequently disbanded in favor of a single group.

The initial efforts of the workgroup resulted in the formation of a Regional Hazmat Response Team in 1997, consisting primarily of the Anchorage and Fairbanks Hazmat Teams. Formal local response agreements were negotiated between ADEC and the Municipality of Anchorage and the Fairbanks North Star Borough. Both the Anchorage and Fairbanks teams were then capable of responding beyond their jurisdictional boundaries at the request of the ADEC SOSC. Teams were limited to emergency response only, and each team reserved the right to refuse an ADEC request (if local Hazmat and/or firefighting needs took precedence over an out-of-jurisdiction response request).

CURRENT CORE CAPABILITY

With the consensus of the work group, ADEC concentrated its efforts in building upon the core Hazmat capability for the two largest communities: Anchorage and Fairbanks. Both now have 24 hour Level A capability. Anchorage has 45 responders, with a 15-man team on duty per shift. The Fairbanks Hazmat Team is an all-volunteer team with 24-30 members.

As discussed, ADEC developed response agreements with Anchorage and Fairbanks that authorize the deployment of these teams anywhere in the state at the direction of ADEC's State On-Scene Coordinator (SOSC). Under the agreements, ADEC reimburses the costs of response and relieves the cities of liability, indemnification, and workmen's compensation responsibilities. ADEC also provides funding to both communities to enhance and expand their Hazmat response capabilities.

The workgroup continued to expand as the interest grew in the State. Following the September 11th , 2001 incident, additional teams were formed either through federal mandate or additional federal funding. The 103rd Civil Support Team (Alaska National Guard) was activated. The EPA also established a Level A capability through their Superfund Technical Assessment and Response Team contractor. Federal Office of Domestic Preparedness funding was acquired for the creation of two additional Level A Hazmat teams in Valdez and Kodiak.

ADEC has also expanded local response agreements with the City of Kodiak and the City of Valdez to include Hazmat response. Both of these teams are now capable of responding beyond their jurisdictional boundaries at the request of the ADEC SOSC. A local Level A Hazmat Team has been established in Ketchikan, and there is an initiative under consideration to expand this team's response coverage to include all of Southeast Alaska.

STATEWIDE HAZMAT RESPONSE TEAM, CONTINUED

To summarize, Statewide Level A Hazmat response capabilities are as follows:

- Anchorage Hazmat Team
- Fairbanks Hazmat Team
- Kodiak Hazmat Team
- Valdez Hazmat Team
- 103rd Civil Support Team
- EPA Hazmat Team
- DOD Hazmat Teams (available thru mutual aid)
- Ketchikan Hazmat Team (currently for local jurisdictional response only)

Team capabilities include the following:

- Level A Capable
- Spill Response Capable
- Statewide Deployable
- Standard Equipment Packages
- Chemical, Biological, Radiological, and Nuclear Capable
- Decontamination Assets available

Statewide Hazmat Response Team Exercise at Whittier (June 1, 2001)

ADEC currently facilitates the meetings of the Statewide Hazmat Response Workgroup, which includes representatives from Anchorage Hazmat, Fairbanks Hazmat, Valdez Hazmat, Kodiak Hazmat, EPA, USCG, DMVA/DHESM, Labor/OSHA, Alaska Railroad, Alaska West Trucking, Alaska National Guard (103rd Civil Support Team), Agrium, FBI, ADHSS, ADOTPF, Department of Defense, Alaska State Troopers, and Operation Respond. The group meets 3-4 times a year to discuss and update statewide response capability and develop standard operating procedures. Other items discussed include lessons learned from recent responses, training, exercises, equipment enhancements, decontamination, weapons of mass destruction (WMD) contingencies, funding, and other topics of interest.

COMMUNITY HAZMAT PROJECTS

ADEC has conducted a series of projects to improve Hazmat response capability in the areas of highest risk based on high population centers that could be exposed to extremely hazardous materials. To date, drills have been conducted at Petersburg, Kodiak, Unalaska, Bristol Bay (King Salmon, Naknek, and Dillingham), Valdez and Cordova. These drills identify critical issues to improve Hazmat response capability as well as provide non-regulatory technical assistance to business. These non-regulatory inspections focus on identifying problems that could lead to future releases of hazardous materials. Additional Hazmat drills are proposed for Ketchikan and Kenai.

NEXT STEPS

The Statewide Hazmat Response Workgroup continues to focus on refining the overall Hazmat response capability in the State. Additional areas of emphasis include developing and sustaining a mass decontamination capability; expanding the knowledge base to include crime scene preservation and sampling for WMD events; continuing to stress local awareness and defensive Hazmat response capabilities in communities with no offensive Hazmat response capability; and continuing to network with other response organizations in the State and nationwide.

ADEC WAREHOUSE HISTORY

SUMMARY
The ADEC warehouses are an integral part of the State's ability to quickly and safely response to oil or hazardous material spills. The warehouses have provided a timely source of recovery and safety equipment to rapidly respond to a spill and reduce impacts to public health and the environment. The main warehouse is located in Anchorage and satellite warehouses are located in Juneau, Valdez and Fairbanks. The department secured the main warehouse in 1995 and began moving equipment to the warehouse from various storage units scattered throughout Anchorage, and hired a storekeeper to organize the warehouse and maintain the equipment. Over the past ten years, the main warehouse has evolved into a multi-functional facility. The warehouse serves as:

- ⇒ Ready for use equipment depot
- ⇒ Re-supply depot for community spill response conexes
- ⇒ Training room for responders
- ⇒ Staging area to outfit responders prior to deployment.

The main warehouse typically contains 2000 feet of containment boom, 3000 feet of absorbent boom, 200 bales of absorbent pads, 300 cases of pompoms, 100 bales of pompom snares, 3 skimmers, portable generator sets, pumps, portable communications equipment, personal protective suits, air monitoring equipment, cameras, GPS units, printers and office equipment "go kits". The satellite warehouses contain fewer amounts of containment and absorbent boom and protective equipment for use in responses within their geographical area.

The warehouses provided equipment for all the large responses throughout the state including freighter spills in the Aleutians, village based cleanups in Western Alaska, shipwrecks in Southeast Alaska, pipeline spills in the Interior and North Slope, and transportation related spills on the road system.

PREPAREDNESS

COMMUNICATIONS

ADEC's communications system consists of a VHF radio network and portable satellite phones. The VHF network consists of fixed and portable repeaters and portable VHF radios. ADEC maintains the following equipment:

⇒ 17 fixed VHF repeaters
⇒ 4 portable VHF repeaters
⇒ 90 hand held VHF radios
⇒ 12 vehicle mounted VHF radios
⇒ 11 portable satellite phones
⇒ 25 cell phones

ADEC inherited eight fixed repeaters constructed during the Exxon Valdez oil spill and constructed an additional nine fixed repeaters during the 1995-2004 period. The fixed repeaters provide separate VHF communications networks in Southcentral Alaska, Juneau, Fairbanks, and the North Slope. The portable repeaters provide VHF communications outside the fixed repeater footprint. The portable satellite phones provide communications in areas not serviced by cell phone coverage. Staff with immediate response duties and supervisors are provided with cell phones.

10 YEAR CHRONOLOGY

In 1995, a $150,000 Capital Improvement Project (CIP) provided for the installation of additional repeater sites on Mount Susitna and Hope Mountain in the upper Cook Inlet area, Ester Dome near Fairbanks, and Ski Hill near Soldotna. Each of these installations linked back to the local ADEC offices. The Mt. Susitna and Hope repeaters are linked to simulcast radio transmissions and expanded the VHF radio network from Wasilla to Soldotna.

ADEC signed an agreement with the Alaska Department of Administration - State Telecommunications for maintenance of the Prince William Sound, Cook Inlet and Fairbanks repeaters. All subsequent engineering, purchases and installations were conducted by or coordinated through State Telecommunications and were consistent with the ADEC Telecommunications Plan for Oil and Hazardous Substance Emergency Response.

ADEC purchased or received from other agencies:
four portable VHF repeater units,
two "scene of action" UHF portable repeaters with their own 4 channel radios and
approximately 90 portable hand held VHF radios.

ADEC established a standard frequency array for PERP's portable radios for compatibility statewide. ADEC also purchased different antenna and power options for use in remote locations.

The State and the U.S. Coast Guard received a total of $200,000 in settlement monies from the Exxon Valdez oil spill for communications at the new Valdez Emergency Operations Center (VEOC). ADEC supplemented this funding with the

COMMUNICATIONS, CONTINUED

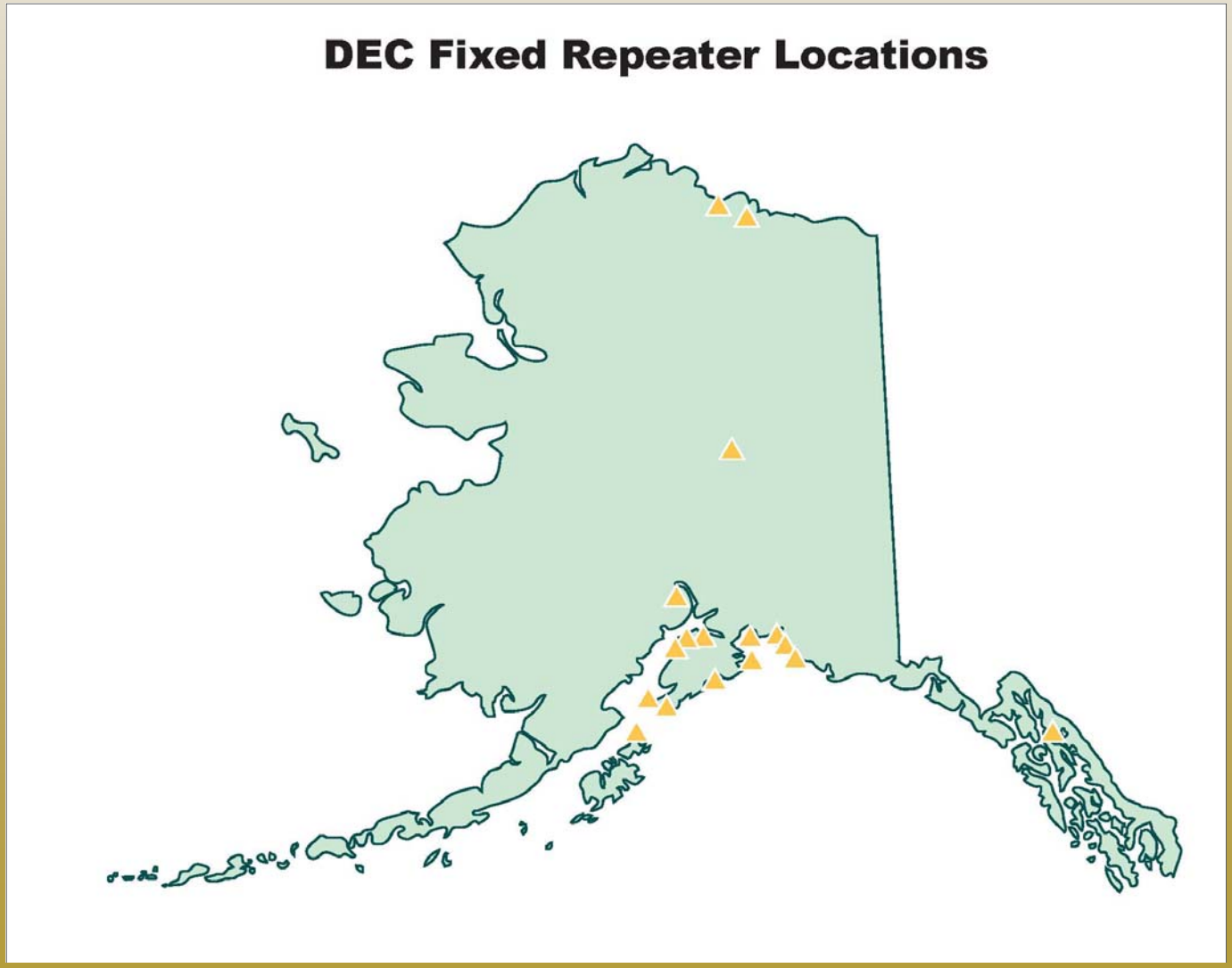
1995 CIP funds to provide for air band, VHF and Marine band radio capability at both the VEOC and the ADEC-Valdez office. These improvements provide state responders access to the five Prince William Sound fixed repeaters, various aircraft and marine band frequencies directly from the VEOC or ADEC office.

In 1996, State Telecommunications prepared and ADEC funded a project to simulcast four of the fixed repeaters in the Kodiak and lower Cook Inlet area. The repeaters were re-engineered to provide two-way communications from the Gulf of Alaska area from Seward to Kodiak to ADEC offices in Anchorage, Wasilla and Soldotna.

In 1997, a $100,000 CIP request was approved for installation of a fixed VHF repeater site on Saddle Mountain near Juneau and two repeaters on the North Slope. PERP entered into an agreement with ARCO Alaska for the installation of the two repeaters to be installed on ARCO communications towers to expand the VHF network to the slope. The North Slope systems were on-line by the summer of 1997 and installation of the Saddle Mountain site was completed in the fall of 1997.

In 1998, a $150,000 CIP was approved allowing ADEC to enter into an agreement with Alyeska to enhance ADEC/State communication along the Trans Alaska Pipeline. The project included purchase of radios and equipment to access Alyeska's new fiber optic backbone communications system along the TAPS and haul road corridor.

In 1999, ADEC purchased four Iridium satellite telephones for areas of the state without existing communications.



COMMUNICATIONS, CONTINUED

In 2000, ADEC purchased a VHF repeater extender to expand the range of either our portable units or our fixed VHF repeater sites. This is the first portable repeater equipment that the Department has purchased since the original acquisition of used Exxon Valdez response equipment.

In 2001, four Global Star satellite phones were acquired to complement ADEC communications inventory. These units use a different satellite configuration and provide better reception in some areas than the Iridium units previously purchased and are easier to use. In 2001, ADEC also purchased a 24-foot trailer using oil spill settlement money for use as a mobile command/communications post. ADEC staff designed and configured this unit with two-way radio units to provide communications at spill sites. Multiple phone lines are pre-wired into the trailer. Power is supplied with 12 volt batteries or 110 volt hookup via supplied or portable generators. The trailer was used on the TAPS 400 spill and in various drills to provide communications to responders.

In 2002, the State of Alaska started a complete change to Alaska Land Mobile Radio (ALMR) system. The change incorporates new digital technology that requires replacement of all current analog equipment. All new radio equipment was standardized and compatible with the ALMR technology. ADEC added a second VHF repeater extender package to the inventory.

In 2003, PERP purchased 63 hand held and 13 mobile ALMR compatible VHF radios. ADEC discontinued service of one Sky Cell unit to reduce costs.

In 2004, ADEC purchased a new ALMR compatible VHF fly-a-way radio system to replace the older analog unit. The State decided to standardize to one satellite phone service; however, ADEC was granted a waiver and permitted to continue both Iridium & Global Star services.

In 2005, ADEC received approval of a $300,000 CIP to upgrade the aging repeater network since the older equipment installed during the Exxon Valdez response was no longer supported by the original manufacturer. ADEC prepared a radio frequency lineup for the new ALMR equipment that includes access to local EMS frequencies.

Thursday, April 26, 2001 HOMER NEWS

. . . Response changing as agen

FROM PAGE ONE

aluminum craft has its own engine and propulsion unit, but is designed to be towed backward by two larger vessels. Oil booms are used as the tow lines, forming a V with the skimmer at the apex. It tows a separate bladder into which the skimmer empties.

The entire operations fits on flatbed trailers, but can also be loaded into C-130 aircraft, Stock said. If an oil spill did occur in Kachemak Bay, he said it would take just six hours from the initial call until the skimmer was in the water, he said.

The Navy has three skimmers available in Anchorage, and two dozen more elsewhere around Alaska and the Pacific Northwest.

The Navy's spill response team comes prepared, Stock added, bringing three trailers that provide a communications station, lodging for the crew, plus shop space and all the necessary tools and spare parts to keep the equipment operating.

"Ten years ago these groups either didn't exist or didn't know the others existed."

– Joe Gallagher

"We're totally self-sufficient," Stock said. If the call came next week, his crew could load up six C-130s and be quickly on the way. "It's just a matter of someone giving us a VISA number," he quipped.

Communications is always a key element in oil spills, and this week in Homer the Department of Environmental Conservation unveiled a new, mobile communications center. It's essentially a race car trailer modified to meet the state's needs, said Arthur Pilot, an environmental specialist with the agency in Juneau.

Like the Navy's skimmer, th trailer can fit into a C-130, on a railr or be towed down the highway b large pickup. It doesn't provide sp the crew to sleep, Pilot said, bu about all it doesn't do.

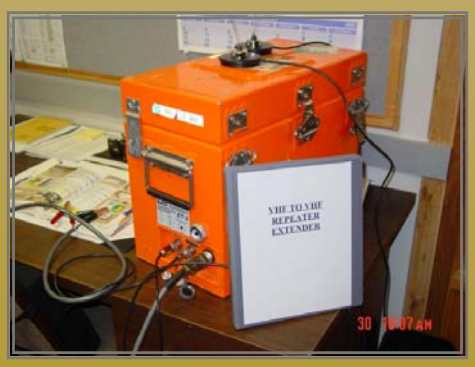
Installed inside are half a dozer of various types and powers, miscell batteries and relays, and hook-ups and satellite phones. The truck ca generator to power the whole affair.

"We can pull up someplace, antennae up in case there's not a nic ing to set up in," and start commun Pilot said. "We tried to make it as s ficient as possible to get into remote

Inside, desks line several wal there are bench seats and a table f conferences, along with such amen whiteboards for drawing.

Coast Guardsmen prepare to de behind the Navy skimmer.

Arthur Pilot of the Department of Environmental Conservation sits in front of a bank of radios in the state's new emergency response trailer.



NEARSHORE DEMONSTRATION PROJECT

The Nearshore Demonstration project was designed to "demonstrate" oil spill cleanup equipment that can be positioned in coastal communities for use by volunteers. The equipment would then be supported by local "vessels of opportunity," such as fishing boats, to contain and recover oil that had escaped initial containment efforts by the spiller.

After 16 months of planning and design and a $1.2 million CIP, the ADEC completed the project in May of 1994. The project consisted of two demonstrations: the North Gulf Coast demonstration conducted in Seldovia, which consisted of a 650-barrel aluminum barge with 500 feet of boom and a rope mop skimmer; and the Southeast demonstration conducted in Juneau, which consisted of a 35-foot aluminum high-speed response vessel, 500 feet of boom, a rope mop skimmer, and a 6000-gallon storage bladder.

As a result of this project, ADEC has three complete spill response packages capable of retrieving and restoring recovered spilled oil on water. In 1996, ADEC transferred the high-speed response vessels "Icy Strait" to the City of Juneau and the "Sumner Strait" to the City of Ketchikan. The transfers consisted of conditional use agreement for a period of three years with ownership automatically transferring to the cities at the end of this period. In 1997, ADEC transferred the "Alaska Responder 650" barge to Kenai Peninsula Borough (KPB) under the same conditions listed above.

ADEC obtained a new $1 million CIP for packages in four additional locations including Kodiak, Dutch Harbor, Haines, and Bristol Bay.

In 1998, ADEC transferred funds to Kodiak Island Borough (KIB) for the purchase of oil spill response equipment that included five 10-foot conexes with equipment to be located in remote communities on Kodiak Island.

In 1999, ADEC provided funds to the Bristol Bay Borough for the purchase of oil spill response equipment, which included two spill response skiffs with tandem axle trailers and a 20' conex of equipment. That same year, ADEC transferred funds to the City of Unalaska (COU) for the purchase of oil spill equipment, which included two 249-barrel barges and one Vikoma Star skimmer. In 2000, ADEC transferred funds to the Haines Borough, City of Haines, and the City of Skagway for the purchase of oil spill equipment that included a response skiff and 300 feet of inflatable Ro-Boom.

These response systems and equipment packages cannot be used by individual companies or corporations to meet response equipment requirements for contingency planning. They are, however, made available to cleanup cooperatives, municipalities, responsible parties, and the USCG to assist in response operations as needed.

ILLEGAL DRUG LABORATORY CLEANUP

In July 2003, Governor Frank Murkowski signed into law House Bill (HB) 59, "An Act relating to the evaluation and cleanup of sites where certain controlled substances may have been manufactured or stored." The impetus for the bill was the increase in clandestine methamphetamine drug manufacturing laboratories in Alaska. HB 59, promulgated into AS 46.03.500–AS 46.03.599, was designed to provide a mechanism for property owners impacted by the manufacture of illegal drugs to have their property declared 'fit for use' after being cleaned. HB 59 tasked the Alaska Department of Environmental Conservation (ADEC) to:

- Establish health-based standards;
- Identify methods for analysis of environmental samples collected;
- Specify sampling handling protocols before analysis to ensure that they are not compromised; and,
- Establish site cleanup guidelines.

To meet these obligations, PERP established a workgroup to identify methamphetamine-manufacturing methods used in Alaska; evaluate existing health based standards for chemical compounds found at meth labs; and research other state regulations for reoccupations or "fit for use" criteria, decontamination guidelines, sampling protocols, and analytical methods for clandestine meth-manufacturing sites. The workgroup's effort to identify health-based standards for substances found at illegal drug manufacturing sites are documented within the report *'Fit-for-Use' Standards for Sites Associated with Clandestine Drug Labs Proposal and Basis for Alternative Standards,* dated September 15, 2004.

The *Guidance and Standards for Cleanup of Illegal Drug Manufacturing Sites* details the process established by ADEC for the cleanup and evaluation of building interiors contaminated by activities associated with the manufacture of certain illegal drugs. This document was adopted into 18 AAC 79 to implement statutory requirements for the evaluation and cleanup of illegal drug manufacturing sites. The law additionally required the Department to:

- Establish and maintain a list of analytical labs in the state that are to be used to evaluate samples taken by the property owner or their contractors;
- Maintain a list of the properties that the Alaska Department of Public Safety has determined to be illegal drug manufacturing sites.

A list and contact information for the analytical laboratories that have been identified to perform the sample analysis required to determine whether a residence is "Fit for Use," are available to the public through the state's website: http://www.dec.state.ak.us/spar/perp/methlab/index.htm.

The "list of illegal drug manufacturing sites" is also made available to the public upon request and through the website link provided.

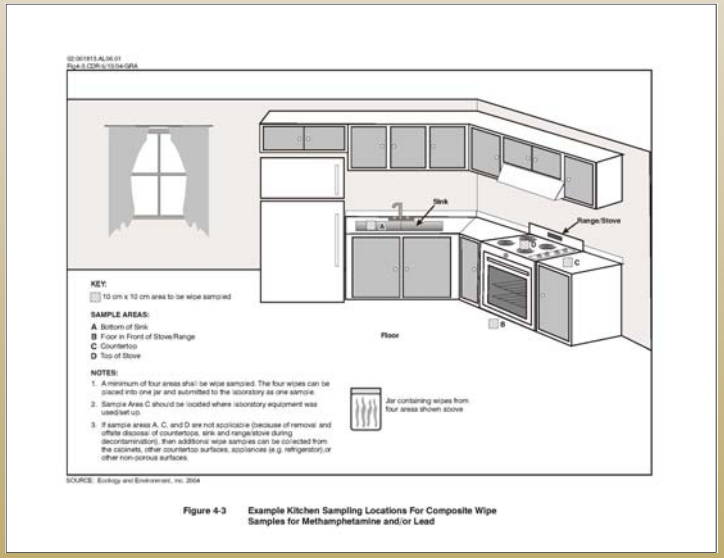


Figure 4-3 Example Kitchen Sampling Locations For Composite Wipe Samples for Methamphetamine and/or Lead

State of Alaska Required Cleanup Standards for Illegal Methamphetamine-Manufacturing Sites

Substance	Cleanup Standard
Methamphetamine	0.1 µg/100 cm2
VOCs	1 ppm of total hydrocarbons & VOCs in air
Lead	2 mg/100 cm 2
Mercury	5 ng/m 3 in air

PREPAREDNESS

COMMUNITY SPILL RESPONSE AGREEMENTS

Community Spill Response Agreements (CSRAs) have been entered into with many Alaska communities to (1) facilitate coordinated and effective oil and hazardous substance release responses within the State, and (2) provide for reimbursement by ADEC of actual costs incurred. The State On-Scene Coordinator (SOSC) activates and directs local resources through the Incident Command System. These resources are intended to supplement ADEC's own response capability. The SOSC will select resources best suited for responding to a particular incident and will request them upon the determination that current response actions are inadequate. Through the CSRA local resources, experience and knowledge are made available to the SOSC, substantially enhancing the State's overall response capability. Below is a list of communities that have signed agreements.

Northern Area:
Northwest Arctic Borough (May 25, 2001)
Fairbanks North Star Borough (June 25, 1996)
North Slope Borough (April 19, 1997)

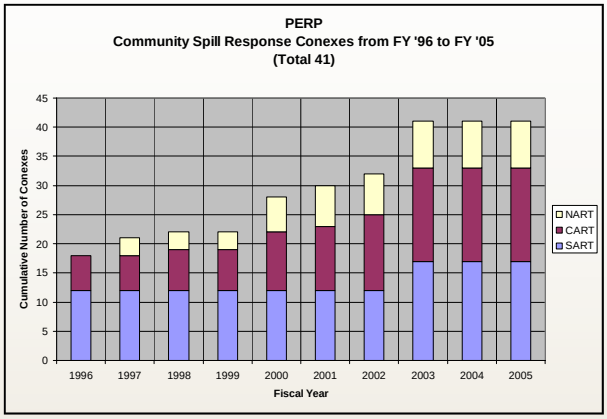
Southeast Area:
City of Craig (May 16, 1996)
City & Borough of Haines (June 25, 1996)
City and Borough of Juneau (Sept 24, 1996)
City of Kake (July 29, 1996)
City of Ketchikan (July 18, 1996)
City of Petersburg (updated July 22, 1996)
City of Port Alexander (May 19, 1997)
City & Borough of Sitka (November 27, 1998)
City of Skagway (November 5, 1996)
City of Tenakee Springs (November 6, 1996)
City of Thorne Bay (October 24, 1996)
City of Yakutat (October 4, 2002)
City of Angoon (August 29, 2003)

Central Area:
City of Akhiok (July 27, 2000)
Municipality of Anchorage (April 16, 1998)
City of Aniak (July 30, 1997)
City of Bethel (October 15, 1997)
Bristol Bay Borough (January 2, 1999)
City of Chignik Bay (October 19, 1999)
City of Cordova (April 19, 2001)
City of Dillingham (Nov. 9, 1998)
City of Goodnews Bay (June 4, 1999)
City of Homer (February 16, 2000)
City of Kenai (May 4, 2000)
City of King Cove (March 14,2003)
Kenai Peninsula Borough (July 11, 1997)
City of Kodiak and Kodiak Island Borough (July 17, 1998)
City of Larsen Bay (August 9, 2000)
Mat-Su Borough (August 25, 2004)
City of Mekoryuk (February 6, 1998)
City of Mountain Village (July 15, 1997)
City of Old Harbor (July 26,2000)
City of Ouzinkie (August 9, 2000)
City of Pilot Point (August 26, 2006)
City of Port Lions (August 10, 2000)
City of Seldovia (September 20, 1999)
City of Toksook Bay (November 7, 2000)
City of Unalaska (May 11, 1998)
City of Valdez (August 15, 2002)
City of Whittier (July 2, 2002)



COMMUNITY SPILL RESPONSE EQUIPMENT CONEXES

Since 1996, ADEC has been working with communities throughout Alaska to pre-position emergency spill response equipment packages. The packages are under the command and control of the ADEC SOSC, but are available at cost to responsible parties, local communities, spill response cooperatives and response action contractors. The packages are inventoried, stored, accessed and managed by ADEC personnel and maintained under an agreement with the local community. If the local government can assist in responding to local oil and hazardous substance releases, the Department uses a community spill response agreement to allow for reimbursement of expenses, including training. The packages supply local communities with a basic "first aid" capability, allowing timely response to an incident without having to wait for outside resources to arrive. They are designed to include equipment suited to the types of spills that may occur in the local area.



Most of the packages consist of 8' x 20' metal "Conex" containers, which are placed in readily accessible locations, such as airports and harbor facilities where they can be secured and maintained. The units are capable of being airlifted or their contents can be repackaged for transport by small aircraft or other means.

In June of 2005, there were a total of 41 response containers located throughout the state. Each response container is stocked with equipment to match the unique needs of each community. Response equipment packages for inland communities differ from coastal communities. The following is a list of equipment typically stocked in the response containers:

- Containment boom
- Anchors and associated rigging
- Tow bridles
- Snare boom
- Sorbent boom
- Sorbent pads
- Pad wringer
- Overpack drums
- Portable storage containers
- Storage bags
- Liner material
- Level D personal protective equipment
- Hand tools
- Light stands

PREPAREDNESS

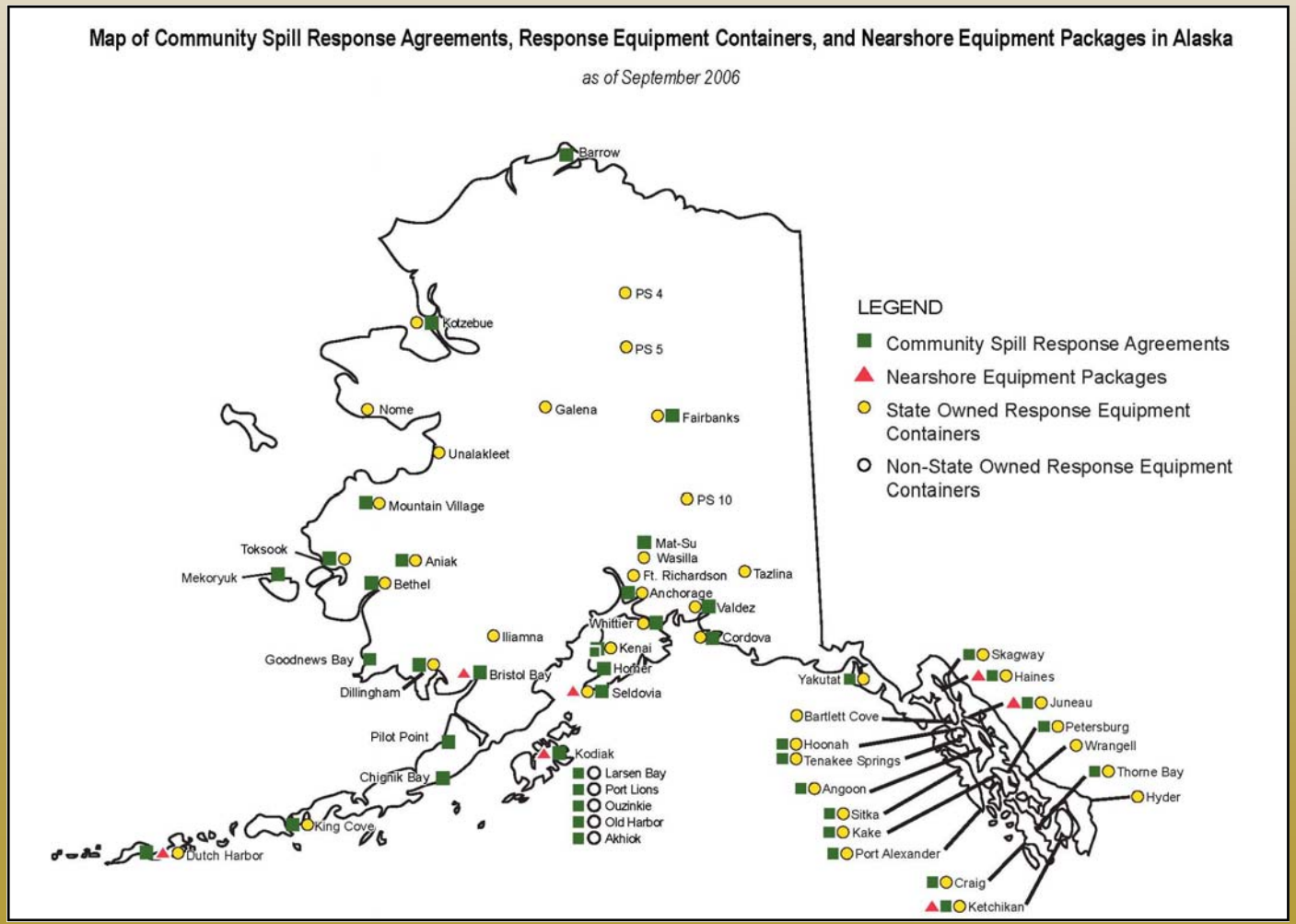
COMMUNITY SPILL RESPONSE

The following list provides locations of the Community Spill Response Equipment Conexes.

SOUTHEAST ALASKA
Angoon – 7/1996
Ketchikan – 7/1996
Port Alexander – 9/2003
Petersburg - 7/1996
Sitka – 7/1996
Skagway – 7/1996
Tenakee Springs – 9/2003
Thorne Bay – 7/1996
Wrangell – 7/1996
Yakutat – 7/1996
Bartlett Cove (Glacier Bay)– 7/2003
Craig - 7/1996
Haines – 7/1996
Hoonah – 7/2003
Hyder – 7/1996
Juneau – 7/1996
Kake - 7/2003

NORTHERN ALASKA
Fairbanks – 2/1997
Galena – 2/1997
Kotzebue – 7/2001
Nome – 6/1997
Pump Stations 4, 5, 10 – 12/2000
Unalakleet – 4/2003

CENTRAL ALASKA
Anchorage – 10/1996
Aniak – 10/1996
Bethel – 10/1996
Cordova – 4/2002
Dillingham – 10/1996
Dutch Harbor - 4/1998
Iliamna - 10/1996
Kenai – 10/2002
King Cove – 10/2003
Mountain Village – 10/1996
Seldovia – 10/2003
Tazlina – 10/2000
Toksook Bay – 3/2000
Valdez – 3/2000
Wasilla – 8/2001
Whittier – 10/2003



PERP RESPONSE

PERP is the State of Alaska's primary response organization for emergency response to oil and hazardous substance releases. The Program's goals are to protect public health and the environment from the direct or indirect effects of spills, guard the safety of persons involved, undertake or confirm satisfactory cleanup and mitigation of spill impacts and restoration of damages, and recover state-incurred costs to the Oil and Hazardous Substance Release Prevention and Response Fund.

The primary services provided by each of the Program's response sections are to:

⇒ Lead the state's response to spills of oil and hazardous substances.
⇒ Respond through area response teams in Anchorage (CART), Fairbanks (NART), and Juneau (SART).
⇒ Implement the Incident Command System for large events and oversee spill cleanup by the responsible party, or take over cleanup when a responsible party is not found or is incapable.
⇒ Evaluate spill impacts, ensure containment and cleanup, and recover cleanup and restoration costs from the responsible party.
⇒ Plan, develop and coordinate a statewide hazardous materials response team capability.
⇒ Participate in government and industry response drills and exercises.
⇒ Manage term contracts with spill response organizations.
⇒ Coordinate integration of Alaska communities into a statewide response system through local response agreements.
⇒ Train local personnel in at-risk areas throughout the state.
⇒ Keep timely and accurate spill information.
⇒ Enforce statutes and regulations relating to oil and hazardous substance spill reporting, cleanup, and restoration of the environment.

To provide these services, the response teams are supplemented and supported by the Prevention Section and Preparedness Section. In addition to their regular duties, personnel from both of these sections augment medium to large response ramp-ups. The area response teams use tools developed by these two sections on a daily basis.

Alaska presents challenges unequalled in scale anywhere else in the country. Due to the isolated locations of most towns and villages, the extreme climate conditions, and rugged and often inhospitable terrain, mounting an effective spill response effort becomes a formidable task.








CART RESPONSE

The Central Area Response Team (CART) responds to spills within the region of the state with the highest population density. The area also boasts some of the richest marine and freshwater environments in the state. As such, the area's natural and sensitive resources are highly prized and utilized more frequently for recreation.

The region also includes the state's highest potential risks for spills — in terms of volume of oil storage and frequency and volume of product transported. The potential pollution from private and industry operations pose significant risks to sensitive freshwater and marine ecosystems.

Potential spill sources within the Central Area include:

- Tanker vessels within Cook Inlet and Prince William Sound;
- Oil terminal facilities and refineries, including the Valdez Marine Terminal;
- Alaska Railroad operations;
- Oil and gas production and exploration platforms within Cook Inlet;
- Fishing vessels and bulk carriers traveling the Great Circle Route; and
- Above and below ground oil tanks.

All CART staff participate in major spill drills to test readiness and routinely address response issues, including places of refuge, dispersants, and *in situ* burning. In addition, CART staff work with two established and active Regional Citizens' Advisory Councils to address stakeholder concerns.



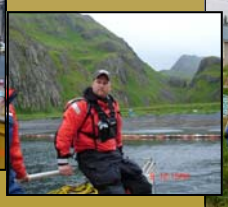











CART: Significant Spill Incidents

Photographs courtesy of APSC

Check Valve (CV) 92 *April 20, 1996*
Pipeline Milepost 591

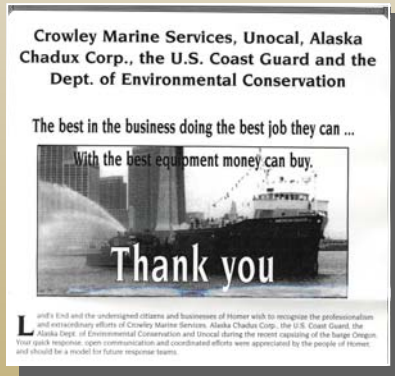
Product and Volume: 38,750 gallons crude oil.
Responsible Party (RP): Alyeska Pipeline Service Company (APSC)
Spill Response: During a routine inspection, APSC, operator of the Trans-Alaska Pipeline System (TAPS), discovered crude oil indicating a leak from TAPS. APSC immediately reduced the line pressure, excavated the line, and discovered a leaking 6-inch by-pass line around CV-92. APSC, ADEC, and the EPA formed a Unified Command (UC) to respond to the spill. ADEC approved spill cleanup plans, including recovery of crude oil and removal of contaminated soil. ADEC staff provided oversight of the cleanup during the 2-year project. Approximately 34,000 gallons were recovered from the 38,750 gallon spill.

The remaining crude oil was isolated in soil and bedrock immediately adjacent to the pipeline at CV-92. Response actions prevented crude oil from contaminating a stream immediately adjacent to the spill site.

Crowley Barge *Oregon* *January 25, 1997*
Ninilchik, Cook Inlet

Product and Volume: 12,500 tons of urea.
Responsible Party (RP): Crowley Maritime Corporation (Crowley)
Spill Response: The tug Sea Valor, attempting to change the tow cable on the Crowley deck barge Oregon, punctured the #5 starboard tank of the barge. The tank flooded, causing the barge to roll upside down, releasing most of her 12,500 tons of bulk granular urea six miles west of Ninilchik, Alaska, in Lower Cook Inlet at a water depth of approximately 120 feet.

The USCG ordered the barge towed while upside down into Kachemak Bay for salvage. Although high winds prevented immediate anchoring, the barge was finally anchored off the Homer Spit and encircled with containment boom. Divers inspected the vessel and found the cargo space empty of urea; however, the fuel tanks and lubricating oils remained intact and no sheens were observed. Diver inspections found minor damage to cargo doors and the 5-story superstructure meant to carry the urea.



A UC, formed with Crowley, ADEC, and the USCG, activated a spill response cooperative to respond if needed. ADEC approved water quality sampling and transit plans. UNOCAL, the owner of the urea, conducted water sampling around and under the barge to determine levels of urea contamination. Crowley rigged the upside-down barge for transit to Seattle for further salvage.


The Assembly rejected the ordi- your house

Belly-up barge heads for Seattle

Vessel is under tow for 1,800-mile voyage

By TOM KIZZIA
Daily News Peninsula Bureau

HOMER — A five-story barge that capsized in Cook Inlet with a load of urea pellets sailed upside-down from Kachemak Bay on Tuesday, beginning a 1,800-mile voyage to Seattle for righting and repairs.

The 400-foot barge Oregon was dragged past the Homer Spit by a tug moving at about 4 knots. At that speed, the Coast Guard said, it will take 15 to 18 days to reach Seattle, provided no bad weather intervenes.

While in the Gulf of Alaska, winter storms forced the tow to abandon the transit and seek shelter in Prince William Sound. Crowley towed the barge to Whittier, where divers found massive damage to the superstructure. ADEC approved Crowley's salvage plan to remove the damaged super-structure and to upright the barge in Whittier.

CART: Significant Spill Incidents

M/V Kuroshima *November 26, 1997*
Summer Bay, Unalaska Island

Product and Volume: 39,000 gallons of bunker C.
Responsible Party (RP): Kuroshima Shipping, S.A.,
Spill Response: A severe winter storm forced the *M/V Kuroshima*, a 368-foot frozen seafood freighter, from its anchorage outside Dutch Harbor. After breaking away, the vessel hit a submerged reef, punctured fuel tanks, and ran aground on a sandy shore of Summer Bay. Responders from the City of Unalaska, USCG, and local residents of Unalaska/Dutch Harbor worked into the night to rescue the crewmembers. Realizing that the 100-MPH winds and the storm surge were blowing bunker fuel up-stream into Summer Lake via its outlet to the sea, responders constructed an earthen dam blocking the outlet and preventing further impacts to the lake. State and federal responders were activated and arrived the follow-ing day, forming a UC.

ADEC staff expended a considerable amount of time responding to the grounding and the subsequent response. This was considered a Type 2 incident response, the second most serious of spill events, requiring acti-vation of PERP response staff from all sections, as well as the use of the State's term contractors and emergency hires. Severe winds, snow, and road closures due to avalanches delayed the winter cleanup. After several weeks of intensive response efforts, including the removal of the free-floating and gross amounts of stranded oil, a winter monitoring program was conducted from January to early April. Magone Marine lightered the remaining bunker from the grounded vessel and stored the fuel in portable on-shore tanks located near the vessel. The salvors used a dredged channel and propeller wash from tugs to free the vessel. The vessel was successfully moved from Summer Bay on March 1, 1998, and towed to Dutch Harbor for repairs. The Unified Command coordinated the re-sponse and conducted an extensive outreach with the City of Unalaska, the Ounalashka Corporation and the Qawalangin Tribal Council.

The UC estimated that about 39,000 gallons of Bunker C fuel oil spilled from the freighter and affected approximately 3,500 feet of ocean shore-line, and 1.6 miles of shoreline in Summer Bay Lake. A Shoreline Cleanup Assessment Team (SCAT) comprised of representatives from the State, National Oceanic and Atmospheric Administration (NOAA), Beak Consultants (on behalf of the responsible party), Ounalashka Corporation and the City of Unalaska was activated in early April to assess cleanup needs. Spring cleanup activities began on April 13 and continued into June. Cleanup techniques included manual removal of oil from the shore-line and lakeshore, pressure washing, and underwater manual removal by divers of bunker oil from the lake bed of Summer Lake. Contaminated sand from the clean up was thermally treated in Dutch Harbor and re-turned to the beach.

The Kuroshima spill response was the largest rampup for the State since the Exxon Valdez oil spill in 1989.

CART: Significant Spill Incidents

ARRC Gold Creek Derailment MP 263.4 *December 22, 1999*
Gold Creek, 36 miles north of Talkeetna

Product and Volume: Estimated 120,516 gallons of jet fuel.
Responsible Party: Alaska Railroad Corporation (ARRC)
Spill Response: A southbound ARRC fuel train derailed while en route to Anchorage. This was the second derailment resulting in a fuel spill in less than two months by an ARRC train (an October 31 derailment spilled 12,450 gallons of jet fuel). On December 22, three locomotives and 13 loaded tank cars (of the 4 locomotives and 53 tank cars in the train) derailed. The lead locomotive, which stayed on the track, brought the train crew into Talkeetna. There was no road access to the spill site, located 36 miles north of Talkeetna. Heavy snows hampered the response for several days following the derailment.

Of the 13 loaded tank cars that derailed, six of these were breached and leaking. ARRC immediately activated a spill response contractor and their response van and two vacuum pump systems from Fairbanks. ADEC and EPA mobilized immediately to the area. Designated a Type 2 response, ADEC staff were activated from all PERP sections. PERP also activated term contractors to augment the railroad's response for lightering operations, groundwater impact modeling, and technical support and consultation to ADEC. Contaminated snow was removed, but most of the spilled fuel soaked into the soil. The extent and location of the product was assessed using ground-penetrating radar and wells. Responders drilled two-inch wells to monitor migration of the product toward the Susitna River and four-inch wells to recover product from the water table surface, recovering 16,000 gallons of fuel from the groundwater.

PERP managed the site cleanup through December 7, 2000, providing oversight of ARRC's response and cleanup efforts during that time. ARRC contractors managed and operated a Soil Vapor Extraction (SVE) system through the winter of 2000. Additional groundwater monitoring wells were drilled along the perimeter of the spill zone. Data was gathered to determine the effectiveness of the SVE and also for conducting a groundwater model. In June of 2001, the case was transferred to the Contaminated Sites Program for long-term management under the site cleanup rules.

Subsequent to this spill, and in consideration of the numerous and significant spills from ARRC within a 10-month period, legislation was passed to categorize the railroad as a regulated facility with prevention and response capability requirements.

Railroad settles with state for '99 spill

CART: Significant Spill Incidents

F/V Windy Bay Diesel Spill *August 4, 2001*
Olsen Rock, east of Olsen Island, northern Prince William Sound

Product and Volume: 35,000 gallons of diesel fuel; 100 gallons of lube oil and 300-500 gallons of hydraulic fluid.
Responsible Party: Arctic Ventures, Inc.
Spill Response: The Seattle-based *F/V Windy Bay, a* 170-foot fishing tender, struck a charted rock and sank in 1000 feet of water in the northern part of the Sound about 40 miles (65 km) southwest of the Port of Valdez. Reportedly, prior to running aground, the captain left the bridge seeking better reception to place a cell phone call. The diesel fuel spill was the biggest spill in Alaska's Prince William Sound since the 1989 Exxon Valdez disaster and posed a threat to the area wildlife.


FV Windy Bay 1500 Overflight 11Aug01.
On-water recovery ops using Current Buster & CSI boom wings. ADEC Photo

Two spill response organizations were activated to assist in the response by the USCG, Alaska Chadux and the Ship Escort Response Vessel System (SERVS). Alaska Chadux, just demobilizing from the *F/V Vanguard* sinking and spill response six miles west of Olsen Island, immediately deployed response assets including boom (2800 feet of containment and 1000 feet of sorbent), and response vessels and personnel. SERVS activated the Valdez Star, a skimming vessel with open-water recovery capability augmented by two Current Buster booming systems (an oil collection system designed to be towed at higher speeds than standard boom). USCG and ADEC personnel, originally responding to the *F/V Vanguard* incident, turned their attention to this spill. Wildlife in the area included numerous seabirds, bald eagles, sea otters, sea lions, and humpback whales. Seven dead oiled birds were recovered. The State mobilized additional response personnel and incident management staff to the emergency operation center. State staff, including personnel from ADEC, ADNR, and ADF&G, identified sensitive areas, conducted overflights and SCAT surveys, approved permits and plans, and monitored cleanup operations.

SCAT assessed shorelines for oil impacts and surveyed approximately six miles of shoreline. Beach cleanup crews worked on Little Fairmont and Little Olsen Island using natural flushing supplemented with low-pressure water spray. Environmentally sensitive sites in the area, including a fish hatchery and two oyster farms, were identified and actions were taken to protect these sites from potential oil impacts. Alaska Chadux deployed containment boom to divert oil from these sites and sorbent boom to collect spilled fuel.

"As we were wrapping up spill response operations on the FV Vanguard, *we received a call that another vessel had just ran aground six miles west of us and we mobilized to assist the stricken vessel. Once on-scene, we all watched in awe as the* F/V Windy Bay *settled with bow pointed skyward and slowly sank beneath the surface. It wasn't long before the red-dyed diesel began to bubble up and spread. I knew then that my deployment to PWS had just been extended."*

Bob Petit, ADEC Field SOSC.

B SECTION

ALASKA BUTTERFLIES
Children love to catch butterflies, and a handful of adults do too. Learn all about a rare breed of humans called lepidopterists (butterfly collectors).
Sunday in Outdoors

ALASKA

ANCHORAGE DAILY NEWS • www.adn.com ★ THURSDAY, JULY 3, 2003

Boat that caused spill nets fine

■ **$16,000:** Owners of Windy Bay had already paid for cleanup costs.

By BEN SPIESS
Anchorage Daily News

The owners of a fishing boat that hit a charted rock, sank and spilled more than 35,000 gallons of fuel and oil into Prince William Sound have been fined $16,000 by the state.

The boat's owners paid the state $77,486 to cover state cleanup costs.

The 180-foot Windy Bay ran aground during calm, clear weather Aug. 4, 2001. Three hours later it sank in 1,400 feet of water with 35,000 gallons of diesel and 600 gallons of hydraulic and lube oil aboard. For the next two weeks, diesel and oil percolated to the surface, spreading a sheen across 40 square miles of the Sound.

The spill was the largest in the Sound since the 1989 Exxon Valdez spill.

Officials with the state Department of Environmental Conservation, the U.S. Coast Guard and a local oil shipping watchdog group deemed the cleanup a success: One-third of the spilled fuel was recovered, and spill skimmers worked as designed.

"Usually we cannot pick up more than 10 percent of (a spill). It seems they moved fairly quickly and did a good job of picking up," said John Devens, head of the watchdog group, the Prince William Sound Regional Citizen's Advisory Council.

See Page B-2, FINE

The fishing tender Windy Bay struck a reef near Olsen Island in August 2001, spilling 35,000 gallons of fuel and oil into Prince William Sound. The state has fined the owners of the boat $16,000.

JIM LAVRAKAS / Daily News archive 2001

Location of fuel spill
Olsen Island
Fairmount Island
Prince William Sound
Location of detail
Whittier
Valdez
Naked Island
Amount spilled: 35,000 gallons of fuel
Amount recovered: 12,000 gallons
Amount fined: $16,000
RON ENGSTROM / Anchorage Daily News

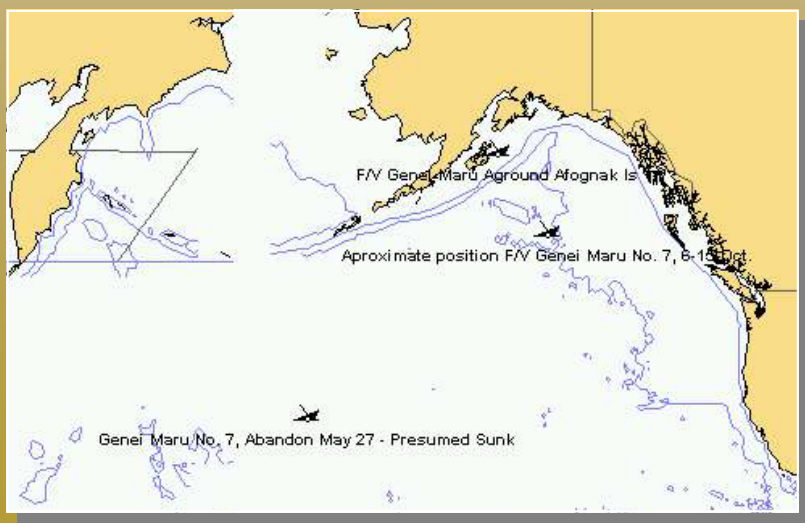
CART: Significant Spill Incidents

F/V Genei Maru #7 *November 12, 2002*
Kodiak Island

Product and Volume: 4,906 gallons of diesel, 8,570 gallons of mixed fluids (primarily diesel fuel, lubricating oil, hydraulic oil and water), 48 cubic yards of solid hazardous materials, one empty oxygen cylinder, one empty acetylene cylinder, one empty ammonia cylinder, two 55 gallon drums of oily waste (absorbent materials) and three 55 gallon drums in 85 gallon over-packs of RCRA wastes (mostly mercury vapor lights and solvents). No ammonia was found in the refrigeration system. The food freezers were opened, tested for hydrogen sulfide gas and food remnants and wrappings removed.
Responsible Party: Owners - KK Yamatsu Yachi Shoten, Owners' representative, Mitsuhiro Toda, Tokyo, Japan.
Spill Response: The *F/V Genei Maru No. 7*, a 97-foot, 140-gross ton "Gig Vessel" (fishing vessel used to catch squid), was discovered Sunday morning, November 10, 2002 partially burned, abandoned and aground on Cape Kazakof, Afognak Island, by a local fisherman who then reported it to the USCG. USCG Kodiak personnel over flew the vessel later that day and found the vessel hard aground against a cliff at Cape Kazakof. On May 27, 2002, the *F/V Genei Maru No. 7*, fishing in the Pacific Ocean halfway between the United States and Japan (39-24N, 172-2W), caught fire and was abandoned by the crew. The crew was rescued by other fishing vessels with no U.S. involvement.

After the grounding, a Unified Command was established in Kodiak with ADEC, USCG, and representatives of the ship's owners to manage lightering and hazardous waste removal. The cleanup revolved around weather windows and was hindered by safety issues; access by sea was limited to calm weather. A landing craft was used to lighter about 6,000 gallons of the fuel on November 15; however, subsequent heavy seas prevented further direct lightering.

Responders used a helicopter to access the vessel via the headlands above the wreck. A forty-foot ladder was rigged between the top of the cliff and the vessel, providing land access. The vessel had a 15 to 20 degree list, which made working on the vessel very dangerous, especially when the decks were wet. The vessel would also become "lively" during periods of heavy seas and high tides, mandating the removal of workers. The vessel's fuel, hazardous waste, and solid waste were removed by helicopter in 55-gallon drums, two at a time. Over 140 sorties were made by the helicopter to transport the fuel and waste to a vessel stationed off-shore. The anhydrous ammonia refrigeration system was confirmed empty and the 5,000 lbs of squid, reported to be aboard the vessel, was never found, although it is suspected that the squid were in a lower freezer that had been breeched during the grounding.



ADEC and ADNR used radio equipment to provide communications between Kodiak and Afognak Islands. The Alaska Army National Guard provided emergency tents and supplies on the shore adjacent to the wreck site should personnel become stranded. Magone Marine, Dutch Harbor, removed the wreckage under the oversight of DNR and ADEC.

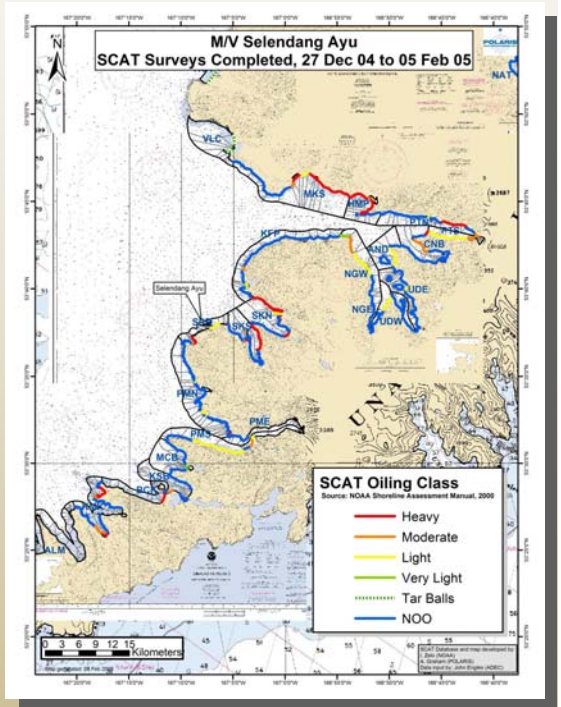
On July 8, 2003, the *F/V Genei Maru No 7* was towed from Dutch Harbor and scuttled in waters approximately 5400 feet deep, at a distance of greater than 12-miles offshore.

CART: Significant Spill Incidents

M/V Selendang Ayu *December 8, 2004*
Unalaska Island

Product and Volume: The actual amount of fuel spilled is unknown. Total volume of fuel initially on board the vessel was approximately 446,280 gallons of intermediate fuel oil (IFO 380) and 31,573 gallons of marine diesel oil. An estimated 321,052 gallons of IFO 380 and 14,680 gallons of marine diesel and miscellaneous oils were released to the environment. The total estimated amount of all oils released to the environment is 335,732 gallons. Approximately 60 thousand tons of soybeans were on board as cargo destined for China.

Responsible Party: Ayu Navigation Snd, Bhd, Port Klang, Malaysia (IMC Shipping)



Spill Response: On December 7, 2004, the *M/V Selendang Ayu* lost power and went adrift off Unalaska Island. When efforts to tow the vessel failed, it broke apart after grounding between Skan Bay and Spray Cape. Subsequent to the USCG's initial rescue efforts, State and federal agencies, and the Responsible Party created a Unified Command (UC) to lead the incident response. The UC mobilized incident management teams, contractors, internationally-recognized salvors, spill cooperatives, response organizations and veteran spill responders. Immediate response actions included deployment of heavy viscous oil recovery systems. Severe weather conditions prevented recovery efforts using this equipment. The oil released impacted over 70 miles of shoreline. The successful lightering of 146,774 gallons of fuel and water from the stricken vessel using a heavy-lift helicopter reduced the threat of additional releases.

The UC also deployed SCAT and cleanup crews to selected priority sites in December 2004 and January 2005. After a winter respite from February to April, a thorough SCAT survey of the 806 shoreline segments was initiated on April 6 and subsequently completed on June 16, 2005. During the height of the cleanup, 26 vessels were on-scene providing berthing accommodations and support for over 200 workers. Beach treatment methods included manually removing heavily concentrated oil, cutting oiled vegetation, dry tilling, and sediment relocation. During dry tilling, responders used heavy equipment to mix up shallow layers of oiled sediment on the beach, breaking up oil and exposing it to air. Sediment relocation involved moving lightly oiled shoreline sediments into the tidal zone, breaking up and releasing the oil through wave action. Prior to relocating sediment, the State recommended deploying containment boom to minimize further impacts. The intention of using both methods was to accelerate natural degradation processes. The State required that sites be cleaned of the heaviest concentrations of oil to the maximum extent possible before responders employed either method.

The State activated staff from all sections in PERP and select staff from PERP's sister programs within SPAR (IPP and CSP) to participate in SCAT surveys and monitoring of cleanup operations. Staff from ADNR assisted in the surveys and subsequent inspections of the shorelines. ADEC staff from Environmental Health were activated to inspect seafood catches and deliveries into Dutch Harbor seafood processors.

The rich commercial fisheries of the Bering Sea make Dutch Harbor one of the biggest fishing ports in the country. Commercial fishermen successful conducted catches of opilio crab, pollock, halibut and other species during the course of the spill response. All commercial catches underwent mandatory seafood inspections

CART: Significant Spill Incidents


USCG photo

which found no contamination of any seafood, and this resulted in no depression of market prices. To enhance public and consumer confidence in the State's seafood products, ADEC conducted the most extensive water quality sampling program yet undertaken. The effort generated detailed information regarding the extent of oiling in the water column, thus allowing development of protection measures used by the seafood processors and fishing vessels to ensure safety of the commercial fishery and attainment of the State's zero tolerance policy for seafood contamination for all commercial harvests. As a result of these efforts, only one minor local tanner crab fishery in the immediate vicinity of the wreck experienced a temporary closure as a precautionary measure.

A total of 1603 bird carcasses and 6 sea otter carcasses were collected during the initial response. State and federal trustee agencies initiated the process of Natural Resource Damage Assessment (NRDA).

SCAT surveys, cleanup operations, and subsequent post-cleanup surveys resulted in these final assessment tabulations:

- Total Segments: 806 (474 miles, 763 km)
- Total Segments Surveyed: 806 (100% of total)
- Segments requiring no treatment or no further treatment: 681 (404 miles, 650 km)
- Segments requiring treatment: 123 (70 miles, 113 km)
- Segments approved by UC for treatment: 102 (for a total of 55 miles, with actual oiled shoreline being 19.9 miles or 32 km)
- Based on additional shoreline inspections and a review of safety issues, the UC approved 21 segments to be removed from treatment consideration when the assessment teams found the segments met endpoint criteria or the segments had access and safety concerns.
- Twenty-six segments were earmarked for additional assessment and treatment for the spring of 2006 (4 miles or 6.4 kilometers of actual oiling).

As this report goes to print, inaccessible portions of the *M/V Selendang Ayu* remain aground in two pieces near Spray Cape, with the bow section completely submerged. All known oil and hazardous substances onboard the vessel have been removed.

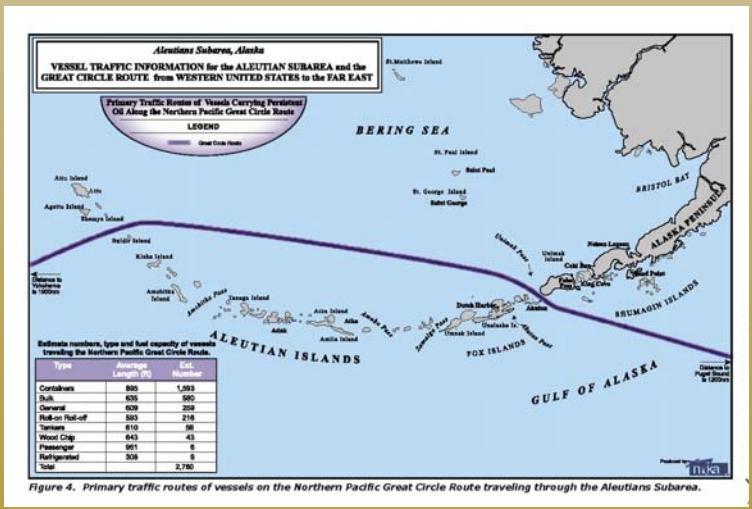


Figure 4. Primary traffic routes of vessels on the Northern Pacific Great Circle Route traveling through the Aleutians Subarea.

The two largest spills during this report's time frame, the Kuroshima and the M/V Selendang Ayu, were from vessels transiting the Great Circle Route.

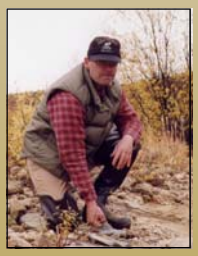
SART RESPONSE

The Southeast Area Response Team (SART) responds to spills in the panhandle portion of the state. The Southeast AK is an area of archipelagos and deep fjords, tidewater glaciers and mountains, vast rainforests and expansive ice fields. Most of the communities exist in isolated pockets with no road access to neighboring communities, which requires dependence on air and water transportation.

The marine environment plays a very significant role in the economy of the region, and petroleum product spills pose significant risks to the marine ecosystem. The primary risks of an oil spill within the Southeast Subarea arise from the following operations or facilities:

- Private fishing vessel
- Ferry traffic
- Cruise ship traffic
- Freighter traffic
- Above and below ground oil storage tanks
- Fuel barge delivery traffic

Four primary responders assigned to Juneau and one in Ketchikan respond to spills throughout the region. The southern and eastern border of SART is shared with Canada. This presents unique challenges to the area response team, requiring an internationally coordinated response effort. SART staff and their Canadian counterparts participate in the annual CANUSDIX drill to test their objectives, procedures, communications, and expectations, and to identify any shortfalls prior to an actual spill event.




Cruise ship strikes rock

SART: Significant Spill Incidents

M/V Wilderness Adventurer *June 12, 1999*

Dundas Bay, Glacier Bay National Park and Preserve

Product and Volume: An estimated 25-30 gallons of mixed lube and diesel oil leaked from the vessel. There was a potential spill volume of 4,200 gallons on board at the time of grounding.
Responsible Party: Glacier Bay Tours and Cruises
Response Actions: On June 12 the 156-foot pocket cruise ship Wilderness Adventurer with 56 passengers and 19 crew aboard grounded in Dundas Bay, a highly sensitive area of Glacier Bay National Park and Preserve. The State On-Scene Coordinator and USCG Captain of the Port immediately established a unified command to respond to the potential discharge of oil from the stricken vessel. ADEC personnel were dispatched to the scene to oversee clean up and salvage operations.

Local responders using state pre-staged response equipment from Bartlett Cove in Glacier Bay completely encircled the vessel with containment boom. Additional state equipment was dispatched from Auke Bay to the site. The ADEC response vessel *Icy Strait* was mobilized. The rope mop skimmer aboard the *Icy Strait* was utilized to collect oil spilled during the grounding. ADEC personnel monitored the boom around the vessel during partial lightering of the fuel and re-floating operations. After temporary repairs and re-floating, the vessel was towed to Hoonah accompanied by the *Icy Strait.* Additional repairs were completed in Hoonah before the vessel was allowed to proceed to Seattle.

M/V Le Conte *May 10, 2004*

Cozian Reef, Peril Straits on the north end of Baranof Island


Anchorage Daily Ne
LeConte grounds on reef

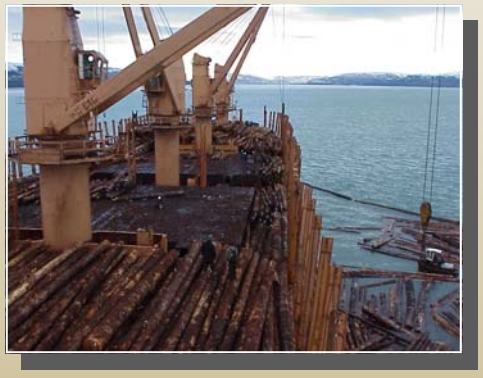
Product and Volume: Potential Spill Only. The vessel did not spill any oil during the grounding, salvage, or transit to Ketchikan. On May 12, the ferry system reported the volume on board at approximately 19,500 gallons of diesel fuel and 1962 gallons of auxiliary oils.
Responsible Party: State of Alaska
Response Actions: The Unified Command, consisting of the SOSC, the FOSC and Alaska Marine Highway System personnel, was immediately established to respond to the possible oil discharge from the vessel. Additional state personnel were activated to respond to this incident and one ADEC representative was sent to the Le Conte to oversee activities on site, including fuel lightering and salvage operations. Lightering of 17,000 gallons of fuel and 1962 gallons of auxiliary oil were lightered from the vessel without incident on May 13 and 14. The remaining fuel, approximately 3,000 gallons, remained on the vessel to power generators and other equipment needed for the salvage operations and the transit to a shipyard for permanent repairs. Agencies identified a place of refuge at Nismeni Cove for repairs to the vessel prior to final transit to Ketchikan for dry docking.

SART: Significant Spill Incidents

M/V Pacsun *February 25, 2000*
Icy Bay

Product and Volume: Bunker C, 220,000 gallons (potential). The *M/V Pacsun*, a 539 foot, Liberian-flag lumber ship, went aground in Icy Bay.
Responsible Party: Lasco Shipping
Spill Response: The Unified Command was established in Juneau. ADEC deployed a representative to Icy Bay in the company of the vessel's marine surveyor to oversee operations on site. The *M/V Pacsun* was initially believed to have grounded on a mud bottom but divers later determined the vessel was on a rock shelf.

Part of the vessel's timber cargo was removed to lighten the ship and the *M/V Pacsun* re-floated without incident on February 28, 2000. During the survey work and while waiting for the propulsion test, a Sea Curtain containment boom was placed around the vessel as a contingency in the event that a spill occurred. No pollution was noted.



Glacier Marine Truck Rollover *January 5, 1998*
Juneau

Product and Volume: Lubricating oil, 300 gallons
Responsible Party: Glacier Marine Trucking
Spill Response: A truck transporting a 30-foot tank containing 4,000 gallons of lubrication oil was traveling through downtown Juneau. The unsecured tank rolled off the transport vehicle in front of City Hall puncturing the tank in two locations.

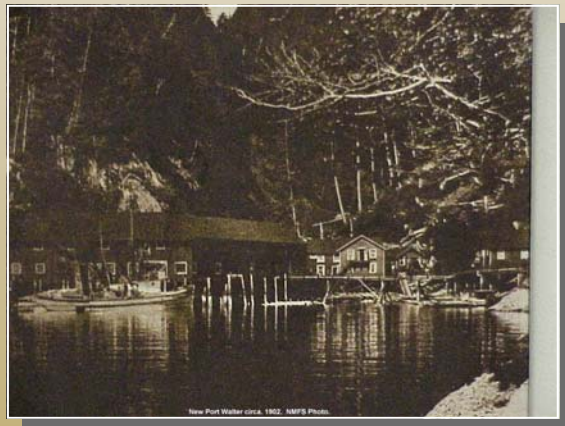
Approximately 300 gallons of oil was discharged into the street with a portion of the oil entering the storm drains that discharge into Juneau's harbor. ADEC immediately responded to the scene, provided sorbent material, and directed the clean up effort. Snow berms were constructed to prevent the oil from spreading. After cleanup was completed, ADEC and U.S. Coast Guard personnel continued to monitor the storm drains in the event oil was discharged into the harbor.

SART: Significant Spill Incidents

Crab Bay Bunker Barge *January 8, 2002*
Craig

Product and Volume: Bunker C, Actual amount unknown, estimated 500 gallons.
Responsible Party: Unknown
Spill Response: On January 8, 2002 the Craig harbormaster reported a discharge of bunker oil from an abandoned wooden barge in Crab Bay 3/4 mile northeast of Craig. The barge had been abandoned more than 20 years prior to the spill and the structure was beginning to collapse.

Two of the barge's fuel tanks, which were previously not known about, became exposed. One of the1500 gallon capacity tanks was determined to be empty. The other tank was found to contain up to 500 gallons of water and bunker oil. The tank containing the oil/water mixture began to leak and float during the high tides. Utilizing equipment from the ADEC spill response container, City of Craig personnel placed boom around the barge and then plugged the tank vents to stop the discharge of oil. An ADEC representative went to the scene to assist the clean up effort and to coordinate with the contractor, local communities, and other state resource agencies. Additional oil was found floating inside the barge during cleanup. This oil was removed in addition to a large amount of oil soaked debris inside the barge.



New Port Walter *November 18, 2000*
Baranof Island

Product and Volume: Bunker fuel estimated to be a 500 to 1000 gallon spill.
Responsible Party: Unknown. However, as land owners, the US Forest Service assumed the role of the responsible party.
Spill Response: The spill was reported when National Marine Fisheries Service (NMFS) personnel found oil floating in salmon rearing pens at New Port Walter. NMFS personnel traced the spill to an abandoned bunker oil tank (16 ft. diameter, 12 ft. high) at a salmon saltery in New Port Walter. The saltery was abandoned in the 1930s and its presence forgotten.

ADEC, the U.S. Coast Guard, and the U.S. Forest Service responded to this incident. ADEC personnel flew to the scene, conducted shoreline surveys, surveyed the tank, and provided oversight of the cleanup. The response resulted in the removal of the residual oily water mixture in the tank and contaminated soil from under the tank. Additionally, the path of oil from the tank to the shoreline was cleaned and oiled debris was removed from the water and shoreline in the immediate area of the discharge. Tar balls were recovered from the shoreline in the Port Walter area and from the shoreline of the fishing community of Port Alexander approximately 10 miles south of Port Walter.

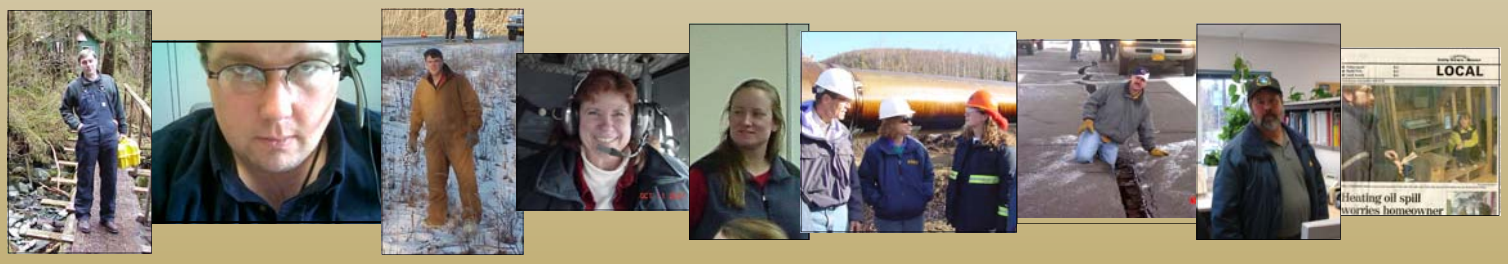
NART RESPONSE

The Northern Area Response Team (NART) responds to spill incidents within an area covering the entire northern half of the state, an area noted for its diverse economies and extreme habitats. The northern area includes extensive river systems, an arctic coastline with seasonal icepacks, vast expanses of tundra underlain with permafrost, and multiple mountain ranges including one with the highest peak in North America. Industry within the area includes the largest oil field in North America at Prudhoe Bay, the Trans Alaska Pipeline, hard rock mining and placer mining. As with all of Alaska, the sometimes conflicting needs of industry, tourism, local recreation, and subsistence use pose unique challenges for responders to protect the public and sensitive areas from impacts from oil and hazardous substance spills.

High risk and potential spill sources within NART include:

- Oil and gas production industry,
- Oil terminal refineries,
- Oil pipelines,
- Oil barges,
- Oil terminal facilities,
- Hard rock and placer mining,
- Above ground oil storage tanks, and
- Alaska Railroad Operations.

NART participates in spill response drills with industry to test response readiness. NART provides technical assistance to smaller communities and individuals for effective and efficient spill response in an extensive area that typically faces unique challenges, including frigid winter temperatures and extreme remoteness.



NART: Significant Spill Incidents

West Coast Aviation *March 24, 2000*
Unalakleet, Alaska

Product and Volume: 84,360 gallons of aviation gasoline
Responsible Party: West Coast Aviation Services
Response Actions: The weld on an aviation gasoline tank sump failed allowing the entire contents of the tank to be released. Company employees notified ADEC and asked for assistance. The SOSC contacted Yutana Barge Company inquiring about pumps and hoses that could be used to recover the spilled gasoline. Yutana agreed provided they would be temporarily released from their contingency plan requirements. The release was signed and the equipment flown to Unalakleet.

When ADEC response personal arrived on site the wind was blowing toward town. People in the houses directly downwind from the tank farm were evacuated. Later that evening the weather pattern shifted, causing the wind to blow away from town, and the residents were allowed to return to their homes.

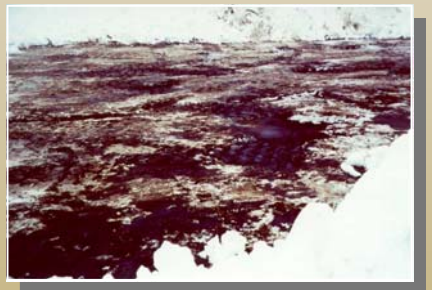
Responders used hoses from Yutana to move gasoline from the tank farm containment area through the pump and header system into an empty railcar for storage. The gasoline was eventually blended and recycled. Because the tank farm had been recently lined, only an estimated few gallons escaped the containment area.

D Pad Flow-line Spill *February 20, 2001*
Prudhoe Bay, Alaska

Product and Volume: An estimated 27,600 gallons of crude oil and methanol.
Responsible Party: BPXA
Response Actions: In an attempt to chemically thaw a frozen flow-line, BPXA workers pumped a tanker truck of methanol and hot crude oil into the line. When the entire tanker truck load was pumped into the line without achieving significant backpressure, crews initiated an inspection. They discovered that the line had ruptured at a point buried in the snow during a recent storm. A large pool of crude oil and methanol was discovered under the flow-lines on the frozen surface of Big Lake and its shoreline.

Response crews began removing free oil and methanol with a vacuum truck and moving out the clean snow from around the site to allow access to the spill area. The contaminated snow and ice were stockpiled for later melting and disposal into an approved re-injection well.

During spring breakup, boom was placed around the spill area to ensure that any residual oil would not mobilize out of the spill area towards the drinking water intake for the BPXA Base Operations Camp. Samples taken from the lake and shoreline were analyzed to verify that the contamination had been removed and the area met state cleanup standards.



NART: Significant Spill Incidents

Milepost 215 Truck Rollover *August 21, 2001*
Richardson Highway 50 miles South of Delta Junction

Product and Volume: 13,000 gallons of Jet A
Responsible Party (RP): Big State Logistics, Inc.
Spill Response: A tanker with a trailing tanker pup, hauling 13,000 gallons of jet fuel from Valdez to Fairbanks, went off the shoulder of the road when the back tanker pup swung wide around a curve, at milepost 215 of the Richardson Highway. The rear tanker rolled on its side spilling and igniting the contents.

Alyeska Pipeline Service Company personnel from Pump Station 10 and local fire department personnel responded to the incident. Due to the amount of fuel and the proximity of the Delta River and Miller Creek, it was decided to let the fuel burn, consuming an estimated 95 percent of the fuel. A minimal amount of the fuel reached Miller Creek and the Delta River; some light sheen was observed on both.

A small amount of fuel was observed on the highway and the shoulder where the tanker pup was dragged for approximately 500 feet. Free product was removed from the highway with sorbents, and crews shoveled contaminated gravels from the shoulder of the roadway.

U Pad Acid Spill *October 31, 2001*
Prudhoe Bay Oilfield, North Slope

Product and Volume: 1,700 gallons of a hydrochloric acid/xylene mixture.
Responsible Party (RP): BPXA
Spill Response: A tanker truck rolled over at the intersection of gravel roads connecting U-Pad and P-Pad in the Western Operating Area of the Prudhoe Bay Oilfield. The spill impacted approximately one acre of wet tundra. This area is generally dominated by low-centered polygons and sedges and grass vegetation.

Responders used sandbags and shore-seal boom to contain the spill. After pilot tests, appropriate recovery tactics were implemented to combat the acid/xylene spill. Crews used a trimmer, a rotating steel-toothed cutting device attached to a front-end loader or bobcat, to shave layers of ice to remove the gross contamination from the surface of the ice with minimal impact to the tundra below.

The recovered snow and ice was melted, and that portion classified as non-hazardous waste was injected at Pad 3, which is a permitted disposal facility for non-hazardous waste. Sampling commenced following the cleanup operations, and all of the spill site met State cleanup levels.

NART: Significant Spill Incidents

TAPS 400 *October 4, 2001*
Livengood, Alaska

Product and Volume: Estimated 285,600 gallons of crude oil.
Responsible Party: Daniel Lewis and Alyeska Pipeline Service Company (APSC)
Response Actions: An armed vandal shot the TAPS line at Mile Post 400. Upon notification to ADEC and USEPA a Unified Command was set up at the Alyeska Fairbanks Emergency Operations Center to develop response plans while the Federal Bureau of Investigation and the Alaska State Troopers secured the spill scene seeking to apprehend the vandal.

Once the spill site was secure, responders from ADEC and APSC began to execute a recovery plan for the on-going release. Response crews dug four containment trenches, each with an access road. Each containment area was equipped with hoses and pumps to move the crude oil to tanker trucks used to transport the oil back to Pump Station 7 for eventual recycle back to TAPS.

The location of the bullet hole along the pipeline proved to be problematic when it came to establishing source control. The pipeline went over Wilbur Ridge with the hole in the line at the base of the ridge. The resulting head pressure at the bullet hole was so significant that a pump-around system was devised to move oil from that segment of line and behind a remote gate valve. This allowed the pressure to be relieved enough so that a clamp could be put on the line to secure the hole.

Following the removal of the pooled oil, the UC established a winter-time cleanup plan. Cleanup crews removed oil-contaminated trees and woody debris. The contaminated soil was removed and hauled off with the wood chips for treatment in a thermal desorption unit (a specialized contaminated-soil burner).

Daniel Lewis was arrested and charged with a variety of environmental and weapons related crimes stemming from this incident. He was convicted and is currently serving a 17-year sentence for charges and must pay a restitution penalty fine of $17,371,386.63.

NART: Significant Spill Incidents

BPXA A-Pad, Well 22 Explosion *August 16, 2002*
Western Operating Area, Prudhoe Bay

Product and Volume: 2500 gallons of methanol and seawater
Responsible Party: BPXA
Response Actions: A well explosion occurred at A-pad Well #22—which injured one person, and released hazardous material. The explosion resulted from a burst of the outer annulus casing caused by high pressure gas buildup. The rupture of the casing occurring 10 ft. to 15 ft. below the surface of the wellhead, and high pressure gas entered the well house building through gravel flooring. The escaped gases within the wellhouse found an ignition source, which caused the explosion and the release of the contaminated mixture.

ADEC personnel responded to the spill event and also participated in BPXA's internal root-cause investigation.

TONY KNOWLES
GOVERNOR

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STATE OF ALASKA
DECLARATION OF DISASTER EMERGENCY

WHEREAS, a major earthquake with a preliminary magnitude of 7.9 occurred on the Denali Fault in Interior Alaska on November 3, 2002, with strong aftershocks continuing; and,

WHEREAS, the earthquake caused a disaster resulting in severe and widespread damage and loss of property, and threat to life and property in the Fairbanks North Star Borough, the Denali Borough, the Matanuska-Susitna Borough, and numerous communities within the Delta Greely, Alaska Gateway, Copper River, and Yukon-Koyukuk Regional

Denali Fault 7.9 Earthquake *November 3, 2002*
TAPS, Mentasta, Stevens Village.

Product and Volume: Multiple small home heating oil spills, TAPS shutdown to avoid a potential spill.
Responsible Party: N/A
Response Actions: An earthquake measuring 7.9 on the Richter scale struck north-central Alaska. NART responded to three separate quake-related incidents: the Trans Alaska Pipeline (TAPS) was thrown off its support members near Miller Creek; a temporary pipeline from the tank farm to the power house in Stevens village was damaged causing an oil spill; and the community of Mentasta sustained damage to numerous heating fuel tanks and a disruption of the water supply.

NART staff monitored the repair of the TAPS line, responded to the spill in Stevens village, and proceeded to oversee the repair of the fuel tanks in Mentasta as well as assess damage in the surrounding communities. Although several of the communities sustained damage, Mentasta was the most affected; therefore most of the response effort occurred there. Due to the cold weather of November it was imperative for the heat to be restored to both public and private buildings in order to avoid a mass evacuation. NART accomplished this by sending staff and a term contractor team to the site, identifying and prioritizing the repairs, and resetting or replacing fuel tanks and fittings as required. Heating fuel was then brought in from Tok and an amount was placed in each tank and the stoves and monitors restarted. ADEC activated a staff person from the drinking water program to join the NART response team to assess the scope of public water contamination problems and recommend solutions.

NART: Significant Spill Incidents

Drill Site 2H Produced Water Spill *March 26, 2005*
Kuparuk Oil Field, Prudhoe Bay

Product and Volume: 51,198 gallons of produced water
Responsible Party (RP): ConocoPhillips Alaska, Inc. (CPAI)
Spill Response: A spill was discovered on Drill Site 2H pad (DS 2H) in the Kuparuk oil production field. The source of the spill was a 6-inch produced water/seawater injection line that transports the fluid from the Central Processing Facility #2 to DS 2H for injection.

The UC was activated and the CPAI's spill response team (SRT) was mobilized to the site. Efforts to delineate the aerial and vertical extent of the spill were immediately undertaken. The gravel near the manifold building was flushed with fresh water. The SRT conducted snow removal operations and divided the tundra into sections with shore seal boom. The tundra was then flushed with fresh water. ADEC determined that the spill site met State established cleanup levels for both seawater (conductivity) and oil based on analyses of samples collected at the site.

The leak was located in an underground section of a cased pipeline located under the gravel pad. CPAI attributed the cause of the spill to internal corrosion of the water injection pipeline.

Photo Credit: Mark Janes